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ON MAKING AND COLLECTING ETCHINGS

THE BEGGAR MINSTREL. BY F. BRANGWYN, R.A.

ON MAKING & COLLECTING
ETCHINGS

A HANDBOOK FOR ETCHERS, STUDENTS AND COLLECTORS, WRITTEN BY MEMBERS OF THE PRINT SOCIETY AND PUT TOGETHER AND EDITED BY

E. HESKETH HUBBARD, A.R.W.A.
(Founder of the Print Society)

1920

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THE MORLAND PRESS
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to
Frank Brangwyn
R.A.

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FOREWORD

Technical books have of necessity a limited public. A cursory glance at the bibliography at the end of this book might lead the reader to suppose there is no room for another work on such a technical subject as making and collecting etchings. But of all the books mentioned in our bibliography scarce half a dozen are still in print. A systematic search of the shelves of the second-hand booksellers might reveal, without much trouble or serious delay, another score odd volumes; but for many of these guineas and not shillings would be asked. Yet the interest in etching increases and deepens: every year sees many recruits added to the ranks of etchers, many novitiates to the brotherhood of collectors.

Despite the current difficulties and expense of producing this book, my colleagues and I decided such an enterprise should be undertaken. The numbers who quickly subscribed to the book soon endorsed our conviction that the need for such a work existed.

Our aim differs from the aim of most of our forerunners in that we endeavour to combine in a single volume informative and reliable matter useful and helpful to collectors and etchers alike: to produce a handbook to which quick reference can be made. We are conscious many more illustrations might have been desired by some; but their inclusion would have immeasurably increased the price of the book with the unwished-for result of putting it outside the range of the average student. That no text-book can take the place of experience none can deny; but that a text-book can save the self-instructing many hours and disappointments most will allow. We hope this book will fulfil such a mission.

Those who have contributed chapters have everyone passed through the mill themselves. Their firsthand experience has not only given them sympathy with the student; but enabled them to anticipate and help solve the many difficulties the neophyte must needs encounter.

As Editor my personal thanks are due to my joint contributors and fellow members of THE PRINT SOCIETY who have readily helped me with proof reading and many a suggestion. I am most grateful to Mr. Frank Brangwyn, R.A., for permission to dedicate this book to him and for his courtesy in loaning a proof of his 'Beggar Minstrel' for reproduction as frontispiece. My warmest thanks are offered to Miss Blanche Funnell and Mr. A. Bell for printing the proofs from the original copper plates. Thanks are also due to Miss Margaret Holder for her kindness in preparing specially for this book the two excellent drawings illustrating the tools used in making and printing etchings. To all those who, by becoming subscribers, made possible the publication of this book, and to Mr. Walter Bradley, the Managing Director of The Morland Press, for his unfailing courtesy and advice on typographical and other matters, I am most grateful.

E. HESKETH HUBBARD

Chelsea Arts Club
143 Church Street
Chelsea, S.W.3
July, 1920

ERRATUM

Page 71, line 20, read "One part acid to *four or five* parts water.

Mathew Henderson

Volendam:
By Mathew Henderson

WHAT IS AN ETCHING?

BY MATHEW HENDERSON

WHAT IS AN ETCHING?

Although etchings are usually small and, apparently, contain little effort, it has been recognised that they can be, and are, the medium of serious and important work; and during the past few years the etching has been steadily growing in favour, as the grace and beauty of this form of art expression has become more intimately understood, and more fully appreciated. As a beautifying element in the restrained and simple schemes of modern decoration and furnishing, the etching contributes to a quiet and subdued harmony; and a growing number of keen and enthusiastic etching collectors seem to find a rare delight in their pursuit.

Appreciation of Etchings

There are, also, many others interested in etchings who cannot yet be ranked as collectors, simply because they are properly desirous of learning more of their subject before embarking upon a new voyage of art discovery, where hidden reefs may bring disaster to the unwary. They want to know what an etching is, what the essentials of a good etching are, and who may be designated as the acknowledged masters of the art. There is a natural hesitancy to pay a substantial price for a print which, later, may prove to be only one of hundreds, or possibly thousands, of prints of the same subject run off from an etched copper plate which has been "steel-faced"—a process by which a thin casting of steel is filmed over the surface of the plate, thus preventing the plate becoming worn by the rubbing inseparable from the process of printing.

Would-be Collectors

Steel-facing

To assist those potential collectors over their difficulties, I propose to explain briefly how etchings are produced, the differences which mark etching and engraving or mechanical reproductions, while at the same time offering some hints which may afford guidance to the collector.

Three styles of Etching

Etching is sometimes divided into three styles: (1) pure line—where the line is exhibited and not hidden by shading; (2) line and shade—which is similar to the line and wash drawings; and (3) shade and texture—where the aim is to achieve an effect similar to painting or photography.

How Etchings are made

For the production of an etching, the method is as follows. A polished copper, or zinc plate, is covered with a wax preparation which resists acids, a steel point (the etching needle) is used in drawing upon the plate, this point cutting through the wax and leaving the copper bare; an acid is applied to the plate, and it attacks the lines where the etching needle has cut through the wax; the acid corrodes the copper and bites into the lines, and the longer the acid is allowed to act the deeper and wider will be the lines. When the biting is completed, the resisting wax coating is removed. A print is then obtained from the plate by rubbing a thick, oily ink over the plate and well into the corroded lines, the surface of the plate being thereafter wiped with stiff muslin to remove the superfluous ink, an operation, however, which leaves the ink in the lines. The plate is then placed, face upwards, on the bed of the etching press; a piece of damp paper is laid on the plate, and on top of both are placed layers of printing blankets, the whole being then passed between the rollers of the press, under pressure. By this means the paper is pressed into the etched lines and draws out the ink deposited there, and also takes up any scum of ink which may have been left adhering to the surface of the plate. The prints obtained in this way from the finished copper or zinc plate, are known as etchings. The plate must be inked and wiped by hand for each separate print.

Drypoint

Drypoints, mezzotints, and aquatints are also classed as etchings. Drypoint is a form of engraving in which there is a burr caused at the side of the lines, and as this burr assists in holding the ink it prints in a beautiful soft line. Drypoint is often used on an etched plate.

Mezzotint

Aquatint

Mixed methods

Difference between Etchings and Engravings

Mezzotint is a form of drypoint done on the plate, but by a mechanical process, and the work is done in tones instead of in lines; while aquatint is a variety of etching used in masses and tones. Drypoint, mezzotint, aquatint or engraving may be used in the production of an etching. The difference between an etching and an engraving lies in the method of making the lines on the metal plate. Etched lines are made by corroding with acid; engraved lines are cut into the metal by a sharp steel tool known as a burin, which is pushed along and into the metal to produce the lines. Engraved lines are smooth, hard, mechanical, and lack the freedom born of the instant response of the etching needle as it glides smoothly and easily over the metal at the will and touch of the artist, producing the rich and flowing lines which are the chief characteristic and chief beauty of the etching. Engraved lines are usually thinner at their ends, whereas the etched line remains the same width throughout its length.

Intaglio Printing

Drypoints, mezzotints, acquatints, engravings, and photogravures are printed in the same way as etchings, the process being known as intaglio printing. Printing from process line blocks, half-tone blocks, and similar mechanical processes, on the other hand, is done by machinery in the same fashion as is printing from ordinary letter-type. Etching should not be used as a cheap method of reproducing paintings, as there are mechanical processes better suited to this purpose; and in this connection it may be interpolated that "painter-etchers" are etchers who employ etching for the production of original work, and not for the work of a copyist.

"Painter-Etchers"

How to tell an Etching

It is important, also, to note that in etching, dry-point, mezzotint, aquatint, engraving or photogravure, the ink lines and markings stand out from the surface of the print, while the back of the print bears a slightly embossed impression, due to the paper being pressed into the etched or engraved lines of the plate; and collectors should look also for the impression left by the edges of the plate which is known as the "plate-mark"; although, if the print has been flattened out under pressure after printing, the raised ink lines, and the plate-mark will be less pronounced. In the rare cases where the plate has been larger than the paper on which the print is made, there will be, of course, no plate-mark. Care should be exercised in respect of the plate-mark, as sometimes etching reproductions by line-block and similar mechanical processes are subjected to pressure imposed upon a plain plate laid on the print, thus imparting a plate-mark as on an etching, but the collector will find himself safeguarded by the fact that where this subtlety has been practised the ink lines do not stand out, nor is the back of the print embossed.

"Plate-mark"

Forged Etchings

It is true that the process-block maker can produce an etched plate by photographic and mechanical methods which can be printed in the same way as an etching, but this method is such a circuitous and expensive manner of imitating etchings, that it is not likely to be employed to copy any but the most costly etchings, and the etching collector runs no greater risk in this respect than the collector of bank-notes and similar script, which can be imitated so closely by mechanical processes that it requires an expert to detect the imposition. Further, the etcher's signature on each proof, beneath the etching, is a guarantee that the print is a good proof from the finished plate. It should be stated, however, that etchers have not always made a practice of signing their prints, while sometimes only a few of the first prints had the signature adhibited: and other etchers, again, state on each print the number contained in the edition, each print in the edition being numbered consecutively,

Signature

Limited Editions

'What is a good etching?' is a pertinent question, but one which does not admit of easy answer. Like the fashions in dress, opinions in this branch of art change and vary, but a sound basis for judgment will be found in the close study of accepted Masters—Rembrandt, Van Dyke, Goya, Meryon, Whistler and Haden, along with the contemporary etchers—Zörn, Cameron, McBey, Bone, Brangwyn and Short. But while it is impossible to deal with the finer points of the art, the subtleties, fine distinctions and varying characteristics whose massed effect produces the masterpiece, there can be laid down some general principles which will be useful. Etching depends for its beauty mainly on line-work: it is essentially a line process. The lines should be flowing, live, and free, and should suggest, also, the construction and show the character of the different materials and elements in the design. Elaborate worked-up tones

What is a good Etching?

Accepted Masters

Essentials of a good Etching

should be avoided; the line-work should suggest colour and tone; and masses of light and shade should be well arranged and simplified. The subject should be as much as possible translated into line in such a way as to suggest rather than to imitate, leaving the imagination some scope to work. A conglomeration of lines should not be employed for that which a few well-chosen lines can express. The drawing should convey boldness and simplicity, with unity and rhythm in the lines, while the main lines, at least, should be clean and clear. What are known as the "explanatory lines" commonly are:—wriggley lines for foliage, hard perpendicular lines for stonework, freer and more broken lines for old masonry, lines imitating grain on wood, and horizontal lines for water. The explanatory lines, however, should not be abused, as they interfere with the freedom and the spirit of the work which should impress one as though the artist really wanted to express something, and found joy in his task.

"Explanatory Lines"

MOTHER AND CHILD.

BY EDWARD ERTZ, R.B.A.

A SHORT HISTORY OF ETCHING

BY EDWARD ERTZ, R.B.A.

A SHORT HISTORY OF ETCHING

What is Etching?

Dry-point

Etching, when stripped of all technicalities, is nothing but drawing with a point on metal. The biting in of the drawing and the printing of the plate—important as these operations undoubtedly are—will always remain mechanical operations, guided of course by the intelligence, and need not even be carried out by the creator of the drawing. Pure dry-point etching is a modern invention. It simply means scratching a design on metal with a sharp needle and printing copies from the drawing with printers' ink. The accidental discovery of the possibilities of taking impressions from engraved metal led to the invention of printed pictures from metal plates; but printed pictures were produced by the Chinese from wood blocks—engraved in relief—long before impressions were taken from intaglio engravings on metal.

Genesis of Etching

Niello

Line engraving was learned from the goldsmiths, etching from the armourers. The practice of ornamenting guns and arms with etched designs is a good deal prior to the oldest printed etching. In ornamenting their works with engraved lines, the goldsmiths of Florence—in the middle of the XVth century—employed a process by means of which they filled up the hollows (produced by the burin) with a black enamel made of silver, lead and sulphur. This method was called *niello*.

Early Plate Printing

At a later period it was discovered that a proof could be taken on damped paper by filling the engraved lines with a certain ink and wiping it off the surface of the plate, sufficient pressure being applied to make the paper go into the hollows to fetch the ink out of them. This was the beginning of plate printing.

First Copper-Plate Engraving The first known prints of copper plate engraving—as revealed by Renouvier—are a series of prints of the "Passion" executed in 1446. The next oldest print is the "Pax of Florence," executed in 1452 by Masso Firiguerra, which was found by Abbe Zani in a collection of prints in Paris. Thus it is agreed that the really first important specimens of *Engraving* appeared at *Earliest Etching* Florence in 1446, but the oldest printed *Etching* that we have been able to trace is a print of a girl bathing, etched by a Swiss engraver and wood-block cutter named Urs Graf, in the year 1513. There is no doubt, however, that the biting of lines with acid was discovered before that date and was probably practiced in different countries simultaneously. In any case, as the artists of Florence were the most numerous and the most actively engaged in the Arts and Crafts, one can easily imagine them suddenly discovering that impressions could be taken from the bitten lines and perman- *Probable Date* ent pictures secured. Of course the exact date of the discovery is not known and it really does not matter whether it was in 1456 or 1463, as some authorities assert. In any case the process was discovered about that date; and if it had not been discovered then, Rembrandt—that natural-born and greatest etcher who ever lived—would have invented it.

For a long time after the discovery that pictures can be made with a needle and acid, the process had no distinctive character of its own; as it was followed quite as laboriously as engraving, and it was not until the proper mordant for copper was discovered (which, according to Singer, happened about the time of Dürer's death) that the practice of Etching became more general.

One of the earliest artists who seemed to understand the real province of etching and its limitations was Augustus Hirschvogel, who produced work at that time, and it is said that in his landscapes he evinced a fine feeling for the proper *métier* of the etching needle, such as suggestion, and that some of his work is not unlike that of the modern master of etching, Whistler.

Augustus Hirschvogel

It was in the following century that mezzotinting was invented by Prince Rupert or by Louis Siegen, a lieutenant in his service, in or about the year 1641. He got the suggestion from a spot of rust on a weapon that a soldier was cleaning. The priority of Von Siegen as the inventor was established by Leon de Laborde in his history of mezzotint engraving which appeared in 1839. Von Siegen's first plate was a portrait of "Countess Elizabeth" and was dated 1642, but the first professional mezzotint engraver was Wallerant Vaillant—a kind of apprentice to Prince Rupert who taught him the art.

Invention of Mezzotint

As the working in different processes is very much a matter of temperament, all these methods—like the aquatint process of painting with acid—have their followers and masters, and aquatinting, as an auxiliary to line-work, gives quick results; especially for tints of skies and foregrounds, and for printing original colour-print pictures. We have seen some beautiful results in recent years. Used in this way, and for black and white tone pictures, it is a new modern art and has great possibilities.

Aquatint

An artist named Kobel is mentioned by Singer as being the best master in the early days of aquatint reproductions of landscape; but for figure-work, it was the Spanish painter and etcher, Goya, who first elevated aquatint to the position of an independent art.

Roulette and Crayon Method

Various other methods of pictorial representation were invented besides line-etching, such as the roulette and crayon method and soft-ground etching; but all these different processes were evolved out of the fascinations that the action of acid on copper has on the experimental etcher.

Invention of Soft-Ground Etching

The method of soft-ground etching was discovered by a Swiss etcher named Dietrich Meyer in the XVIIth Century. This method was neglected by etchers until Felicien Rops—a Belgic-Parisian—who used no other method—drew attention to its possibilities by his powerful designs. Rops died only a few years ago.

Invention of Crayon Method

This method is as direct as line-etching with the needle and has nothing to do with aquatint or roulette processes. François, Demarteau and Bonnet lay claim to the invention of the crayon method, and Bonnet's book describing *his* invention of engraving pastels appeared in 1769. However it is probable that Jean C. François was the real inventor of the crayon method. Singer says that François seems to have been an interesting sort of man, continually experimenting with different methods of engraving. It is by no means certain that he was not the earliest to discover aquatinting, although he does not get the credit for it.

'La Manière Criblée'

Another method invented was 'La manière criblée.' It was used at one time—without the aid of acid—for obtaining tones and consisted of roughing the plate with roulettes, needle-punches, etc., the incisions made on the bare metal were sufficient for obtaining gradations of tone. A goldsmith named Franz Aspruck, born in Brussels in 1601, was the inventor of the roulette; but the etcher Boissieu used it more than anyone else. Occasionally a plate has been engraved altogether by means of the roulette. Singer mentions a "superb little print of fisher-boats becalmed in a mist" by H. Guérard.

XVIIth Century Etchers

In the XVIIth Century there were numerous engravers and original etchers besides Holler and Rembrandt. Towards the latter end of this century we have Callot—whose etchings of beggars are so well known — and Salvatore Rosa, who etched his own pictures. In England we had numerous engravers and etchers besides the great painter Hogarth, who etched a few of his own plates, and a little later we have D. Stoop—a naturalized Dutchman—whose exquisite handling of line in his etchings of horses is equal to Rembrandt's. He restricted himself, however, to etching horses and, when we consider that they were executed before the invention of the camera, his keenness of observation and anatomical accuracy are a marvel. Moreover they are drawn with a spontaneous looseness, a delicacy combined with strength that leaves nothing to be desired—especially in his best plates.

Dutch and English Animal Etchers

Animals by some of the Dutch artists, like Bergheim, Carl du Jardin, Potter and Reinhart are somewhat similar, and the English animal etcher Hills, and Julius Cæsar Ibbetson did some good plates also, but Stoop's horses have more character and show much more artistic acumen.

The barren XVIIIth Century

In a general sense there was little original etching done in the XVIIIth and early XIXth centuries—

especially in landscape—and what did appear resembled the engraver's art in technique more than the etcher's. The plates were—in the majority of cases—large prints of classic landscapes, which were so much in vogue at that time. Nevertheless, they were executed with such elaboration of line-work and texture drawing that one marvels at the technical skill and patience required for their production. The prints by W. Kolbe are about the best I know of this class of work or school.

There was such a close connection between this style of etching and of engraving that the latter seems to have taken its place; especially in France and in England, where so many huge plates of cathedrals, interiors and exteriors have been produced, which—although they are etched—have more the appearance of engravings and can hardly be classed as etchings in the present acceptance of that term.

Turner's "Liber Studiorum"

Turner's "Liber Studiorum" was done chiefly in mezzotint. Turner worked on some of the plates himself, especially those done in aquatint and line; but up to that time line engraving and mezzotint seemed to rival each other, and original etching was not revived until about seventy years ago when Bracquemond and Jules Jacquemont resuscitated the Art with original etchings of still-life. But the artist who re-awakened interest in fine-line etchings was Meryon; who produced the series of etchings of Paris so much written about lately.

Revival of Etching

Meryon

Haden, Whistler, Fortuny and Lançon

After Meryon the best known etchers are Haden, Whistler and Fortuny, and Lançon—with his series of etchings of the Franco-Prussian War—followed. Some of his plates show great technical skill and clever line-work. The work of Felix Buhot also appeared, and Lalanne whose book on etching stirred up so much fresh interest*—produced numerous clever plates. Lalanne's book induced many American artists to try the art of etching, and clubs were formed in New York and elsewhere, the members of which emulated Haden, Whistler and Fortuny and some good work was done by Robert Blum, Parrish, Duvenick, Field and others.

Lalanne's Book

American Etchers

Fortuny's paintings and etchings had a marked influence on his contemporaries—chiefly in France and Italy, and on the American artist R. Blum, whose illustrations and etchings of Japanese life have a fine etching quality as well as a decorative effect. They are executed with such delicacy, reserve and knowledge that one is captivated by their cleverness. Unfortunately this artist died comparatively young.

R. Blum

From about 1865 onwards the number of original etchers multiplied very rapidly. In London there were one man shows and exhibitions by painter-etchers. In Paris, of course, the art made great headway, and etchers and engravers usurped a special room at the annual Salon Exhibitions and at the Universal Exhibitions of '69-'89 and 1900. Painters took up the art also, especially Leon L'hermitte and Le Gros; but there are also a few fine-plates in existence, executed by such men as Delauney and Constant. These were published by the magazines "L'Art" and "L'Estampe" and "L'Estampe Moderne." It becomes more and more difficult to extract from the mass of the material presented, the "pure metal from the paler gold," for if—as

Growing popularity of Etching

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*See bibliography at end of this book.—Ed.

Lanzi wrote in 1790—there were 3,000 artists worth mentioning between the years 1200 and 1790 what must the number be now that women have come more and more to the front rank as artists and "craftsmen"?

Women Etchers

It is a curious fact that we meet with no mention of women in former times when we study the history of Etching; but during the past two or three decades we find that there are several women etchers in various countries, who have won distinction in this branch of the fine arts. It is useless to mention names. "What we want to know is less the doer of the work than the work done."

At the present time we can count women among our most original designers, illustrators, and painters, and in the subtle art of Etching—an art which requires technical skill and artistic acumen of a peculiar kind—there is a long list of women's names which is growing daily.

"Sex in Art"

If such a thing as "Sex in Art" exists then it manifests itself in the superlative degree in this particular craft called Etching, which is essentially and intensely feminine—technically and artistically, because this art of the needle requires a delicate touch where "each stroke of the point contains in itself the principles of life and death" with a dash of tenderness in its illusiveness which is, at the same time, exact, precise and elastic. Moreover one is sensible of a modesty and reserve in good etchings which is not so obviously felt in other branches of art which are more muscular and masculine.

The Etcher's Sixth Sense

There are many capable etchers—women and men—who possess a sixth sense of knowing how to nurse the vital lines in an etching and who have the power to use these lines, either singly or in masses because they understand the fundamental limits and possibilities of the etchers' craft. Their number is legion, especially if we eliminate the barriers of nationality, but it would be impossible to catalogue them all. I may, however, mention two, without pricking anyone's sensibilities, because these two artists stand at opposite poles in the sphere of art and both of them are unique in temperament and in achievement. I mean the etchers Helleu and Brangwyn. The former has carried portraiture in pure dry-point etching to a position attained by no other etcher either before or since. The latter's etchings crystalize a name which—before these magnificent achievements on zinc appeared—was rather a vague term. I mean the appellation of "Painter-Etcher." Brangwyn's etchings are literally paintings in line and printers' ink. They have a gigantic swing, a bigness of conception and of effect that are staggering, and the only expression sufficiently adequate to classify them among so many kinds of original printed pictures is to name his series of prints the *Grand Orchestra of Etchings*.

Helleu and Brangwyn

"Painter-Etcher"

The modest price of all etchings and the large output of really good original work proves that "in modern democratic governments the mind being free impresses art to essay its universal range," especially art as it is manifested through the medium of Etchings which "can be taken to the home and find shelter by the fireside and so, from the palace, masterpieces and gems of *original art* descend to the humble hearth and become ingredients of common life influencing taste and advancing natural refinement."

THE WHITE BARQUE.

BY EDWARD W. CHARLTON, R.E.

HOW ETCHINGS ARE MADE

BY EDWARD CHARLTON, R.E.

Metals used for Plates

There are three metals for the etcher to choose from, copper, zinc and steel. The first has so great the advantage that the others can be shortly disposed of. Steel serves well enough for the ordinary engraving, it hardly lends itself to the free and fine work obtainable on copper. It bites almost as rapidly as zinc. Zinc being very porous has a tendency to bite in a broad rather than a deep line, and a deep rather than a broad line is what the etcher desires and can obtain—on copper. The process of facing copper plates with steel has quite superseded any claims a steel plate may possess and so that metal can be laid aside, rust (if any) and all, its liability to this being another drawback to the steel plate.

Steel

Zinc

Steel facing

Peculiarities of Zinc

Zinc, therefore, takes second place. It is responsible for many an excellent conception boldly and effectively executed. Being very soft it requires a greatly diluted mordant—one of acid to eight or ten of water, and it bites rapidly. Not that it is impossible to produce fine lines on zinc, that is quite feasible if the acid is diluted enough, but I would suggest it is more suitable for subjects which are none the less effective for being powerful even to coarseness in execution. A beginner might and probably would be taken by surprise at the rapidity of the biting and the intensity of the ebullition (bubbles caused by gas) arising from a zinc plate, and becoming alarmed, a catastrophe might happen: to the plate, to the hands immersed hastily into the bath to hurry it out, to the clothes from the splash at the not improbable failure to do so, and possibly to the face if not the eyes.

'Biting' precautions

Consequently it is imperative when biting any kind of plate to have handy a good sized basin or shallow vessel, three parts full of clean water. But the adoption of an old coat with a "bibbed" apron looped over the neck, the precaution of not holding the head close over the bath when taking the plate out, and the elimination of carelessness will minimise any anxiety as to accidents. However, they will occasionally happen, and it is well to be prepared for them. Besides, in any case water is wanted for the washings.

Copper

Zinc, therefore, not proving altogether successful, a copper plate shall take first and its rightful place. Begin with a small one not larger than, say, six inches by four. It should be neither very soft nor very hard. The harder the copper the more rapid and deeper is the biting. The correct quality is not easy for the inexperienced to determine, but there is no need to worry over this because any reputable firm who supplies etching materials can be depended upon.

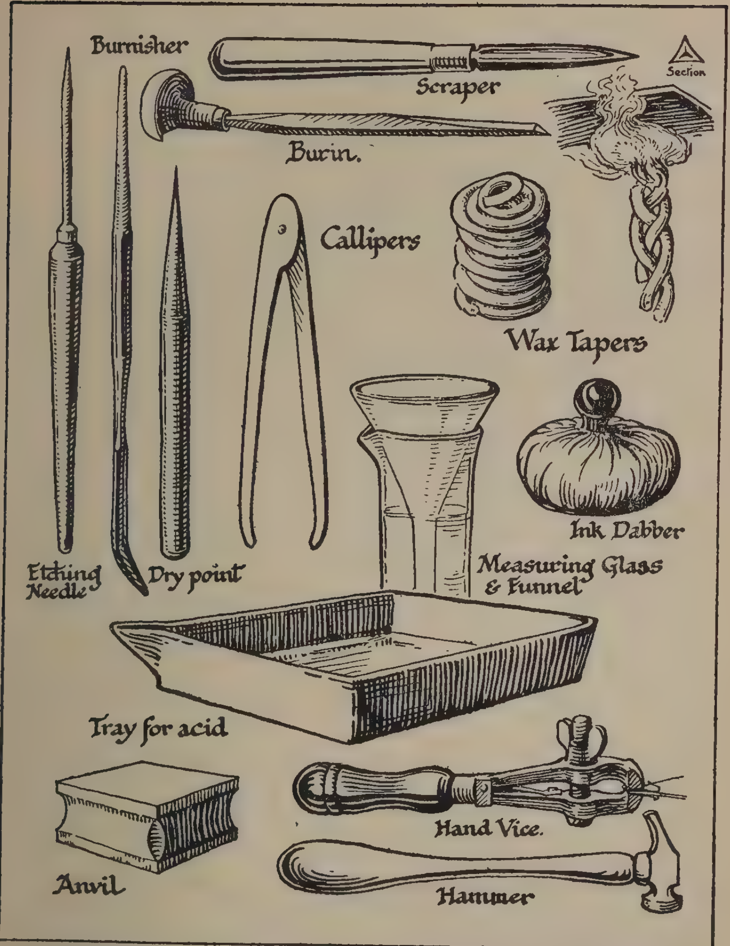
Cleaning the Plate

On commencing work the first necessity is a *clean* plate. It should be absolutely free of grease or dirt of any kind. Rectified turpentine wiped over with a soft piece of linen rag or old muslin (I always use the latter) is the first cleanser, followed by a rubbing with a little of the best quality whitening. A few drops of chloroform is a capital finisher, but if I have none by me I use methylated spirit. Neither are positively necessary if care has been taken to wipe off all the whitening. Both sides of the plate should be cleaned.

Now see that the following requisites for laying the ground on the plate are ready for use.

Hand-vice

A hand-vice in a wooden handle with a piece of thick paper or thin cardboard placed in its jaws to prevent in-



·ETCHING·TOOLS·AND·MATERIALS·

dentations by the teeth. If the cardboard is doubled over—hinged as it were—and pushed in as far as it will go it will open and close with the vice and not be liable to slip.

Ball of Etching Ground

A ball of etching ground. It may be assumed that this has already been purchased, as etching material makers can alway supply it ready for use, so it is not generally necessary to go through the careful process of mixing the proper proportions of the ingredients, which are asphaltum, gum mastic and pure white wax (Abraham Bosse's ground) or asphaltum, Burgundy pitch and white wax. The ball is wrapped in a piece of fine silk bunched up sufficiently to hold by and tied round with thin string.

Dabber

A dabber. This is easily made. On a piece of taffeta (fine and close silk such as is used for the ball of ground) lay a round piece of stout cardboard from two to three inches in diameter, upon that place a small bunch of horsehair and on the top of that some cotton wool. Draw the silk tightly over all and bind it with string. Every part of the dabber should be quite clean and free from dust and *kept* free from it. Whilst about it make two dabbers as there is the transparent etching ground used for retouching underbitten work to be considered, which may be required later on. When purchasing the ordinary ground buy a ball of transparent ground as well.

Wax-Tapers

Wax tapers for smoking the plate.

LAYING THE GROUND

The Heater

Having fixed the edge of the plate in the vice, the back of the copper should be held over a heater: that is an iron plate with sides partly cut out, leaving the corners as legs and standing like an inverted box high enough to allow of a smokeless heating agency, such as a spirit lamp or gas ring, being placed underneath and heated consistently. Failing a heater, the gas alone or the spirit lamp will serve. As soon as the plate is hot enough, but not *too* hot, press the ball of etching ground on the upturned surface, till it melts through its covering and then rub it over the whole plate. If this is too hot—and it certainly is if the ground boils—it must be allowed to cool, for if burnt, even only in parts, it is useless as it would flake off in the mordant; nor must the plate be overloaded with the ground, as then it would not be possible to draw very delicate lines with the needle. In laying a ground beware of dust. It has an evil tendency to attach itself to the warm etching ground and dabber, causing with subtle malignity an insidious eruption diagnosed as "pitting," *i.e.* numbers of tiny dots, in many cases difficult to see without a lens, and which if not stopped out in time are almost impossible to erase without spoiling the lines of the etching amongst which they may be mixed and will appear on the proof in the full strength of an unsightly rash. It is therefore wise to ground a plate in a room free of dust traps, as the appearance of this first proof would have the effect of taking the beginner's breath away and the value of all his labour at the same time. The dabber when finished with for the time being should be rubbed smartly—after warming slightly—with a piece of material which will not add hairs or bits of thread to the dust (if any) already on it, and when quite clean stowed away in a box.

Laying the Ground

"Pitting"

Care of Dabber

When the ground has been carefully spread and with the plate still warm dab it all over, quickly at first, more gently as it cools till a *thin* and equal coating is laid. A "well and truly laid" ground is one upon which it will be possible to draw the very finest lines and yet will be capable of resisting vigorous biting, that is to say, it must be thin enough for the one and thick enough for the other.

A well laid Ground

The next operation is the smoking. The plate being still warm or if too cool re-heated till the ground shines, turn it over and smoke it with the wax tapers. Keep these continually on the move in every direction and not too close to the plate—say with the flame just clear of it, or else there is again the risk of burning. The result of successful smoking is a shiny black surface all over; that of failure very "dead" looking patches here and there. Disappointment (dispelled by determination and experience) being part of a beginner's outfit, when these patches are present, clean the plate off with turpentine and begin again.

Smoking the Plate

Liquid etching grounds have a distinct advantage over the ordinary sort, in that a much better surface is laid in a much shorter time. As a rule instructions are labelled on the bottle but the method is to hold a *cold* plate face upwards over a shallow vessel—such as a zinc tray—slightly inclined, and then to pour the ground on to the centre of the horizontal plate which is moved about till the liquid flows evenly all over it. It is then tipped up on end and the superfluous ground draining into the bath can be poured back into the bottle through a glass funnel with a small piece of clean sponge or cotton wool inserted in the neck to arrest any dust in

Liquid Grounds

the liquid. When the plate is dry and the ground hard—a matter of a few minutes only—it must be smoked in the manner described above and to obtain the final necessary shine moderately heated underneath.

As the ground dries in so short a time it is obvious that speed is indispensable so that a little practice is needed to ensure complete success. When that is attained the result is a perfect surface and one which from experience I would be very sorry to exchange for the older kind. Nevertheless, however great the superiority of the liquid etching ground, that should not deter the beginner from becoming perfected in the use of the ball and dabber.

Herkomer's White Ground

That inventive genius Professor Herkomer produced a "White Ground for Positive Process" which, having a surface like paper, permits of the lines drawn on it standing out clear and dark. It may be useful to give his chief instructions regarding this:

"Lay a ground in the ordinary way with a dabber but leave it unsmoked. It has a golden light brown colour and is dry as soon as the plate is cold. Then take what actors use for their faces—so-called grease paint—to be had at any theatrical shop. You take the white grease paint and hold it in your left hand and take from it what you get by dabbing your finger on it, which you dab back on to the ground that is already laid on the plate. Dab it as equally as possible but not too thickly. Then rub into that somewhat soft upper ground, which will be of a pale, warm white colour, the finest powdered zinc white with a soft and rather thick camel hair brush. This at once clings to the greasy substance of the grease paint and the result is a dead white surface like paper. Where the point removes this white ground the copper shows as a dark brown or almost black line. The plate must not be too cold when the grease paint is dabbed on and the chill should be just taken off when the zinc white is brushed into it, but not more than the chill. Here we have literally two grounds put upon the plate, the first an ordinary ground which in itself is sufficiently safe for all biting if properly laid and the second being composed mostly of mutton fat has its own inherent power of resisting acid."

The laying of a transparent ground with the roller or dabber comes within the more advanced province of retouching and rebiting, as does laying a ground with a brush.

Additional Requisites

It may be as well to mention here the other requisites for carrying the plate up to the stage of readiness for printing.

Tracing

For the Tracing:—(1) Tracing paper, a fine pen and black drawing ink, a wool needle in holder, a soft pencil (B.B.), two or three sheets of tissue paper. Or (2) a hard pencil substituted for pen and ink and black transfer paper for the soft pencil. Or (3) a gelatine sheet, a very sharp needle, scraper, burnisher, black lead powder or red chalk and some oil.

No. 1 may not be the conventional way but I always prefer it as I find I can get with these materials fine and clear lines without the trouble occasioned with No. 3. No. 1 is but a variation of No. 2. Inked lines can be seen better through the back of the tracing paper than pencilled ones. I make a careful pen and ink tracing, then blacken that side with the stump of a BB.

pencil well into the grain of the paper, afterwards taking the superfluous lead off by lightly rubbing with the finger covered with one thickness of rag. With the blackened surface next to the plate a clear margin of one to two inches is turned over at the top and fastened to the back (stamp paper will do) a lower margin of half an inch or so beyond the edge of the plate being left unturned, as the left hand keeps the paper smoothly down. This allows of lifting the paper to examine progress. The lines in ink clearly seen on the black ground are carefully gone over with the blunt (wool) needle, the hands resting on a tissue paper pad. It is hardly necessary to add that the pressure should be sufficient to reproduce every line but not damage the ground. I do not think I have ever failed to get a clean and clear transcript in this way. In a rather complicated sketch it is quite easy to forget which lines have been traced or not. That is why I only fasten the paper by the top edge.

Tracing with Gelatine Sheet

The gelatine sheet process is excellent for tracing very fine lines. A sharp needle is used and all the bur raised by this removed with a scraper with great care so as not to scratch the gelatine, or it can be rubbed off with a clean rag. Black lead powder or red chalk is then rubbed into the lines, the sheet turned over and fixed to the plate with the vice and the lines smoothed over with the burnisher slightly oiled. In this process it is necessary to bear in mind four things. No lead or chalk should be left on the gelatine after the lines are full; all the bur should be removed—the finger tips passed over will tell this; the gelatine must not be scratched with the scraper or the marks will print, and the right pressure should be applied with the burnisher especially if and where the sheet does not lie absolutely flat. Later on the beginner's praiseworthy ambition having removed him from that category he will be eager to draw his subject direct on to the plate with the needle, a branch of the art which in my opinion is one of the chief fascinations of etching. He will thus save—if endowed with accuracy and confidence—the preliminary finished drawing and therefore the tracing as well, but it is wise to make a rough sketch and take some notes for reference during the remaining work.

Requisites for Drawing

For the Drawing:—Needles of various sizes, a magnifying glass, a looking glass, a screen (for subduing the light), an oil stone, a broad soft brush and a pad of tissue paper.

Needles

As regards needles, besides Rhind's excellently balanced one—I like a well-balanced needle though it may not be important (did not Turner use a three pronged fork with two prongs removed?)—I work with any sort of sewing needle, fashioning the holder for myself. A needle requires to be kept sharp and with a true point; but if too sharp it will cut into the copper. To make a good point, when sharpening, it should be laid flat on the hone and continually rolled, not worked backwards and forwards as if it were a knife. To get the proper degree of sharpness, or rather bluntness, it is worth while to imitate M. Lalanne's treatment. "Describe a large circle on a piece of cardboard and continue describing circles of a continually decreasing size. The nearer the centre is approached, the more vertical must be the position of the needle."

Sharpening the Needle

The Screen

A screen is soon made. I strain tissue paper on a

30 by 24 canvas stretcher and by means of a screw eye at each top corner, two in a ceiling-beam which happens to come in the right place and string, it can rest on the table at any angle I want. Tracing paper, tracing cloth or some thin material fastened across a worn out or damaged wooden picture frame will also answer the purpose. Of course the paper tears easily but is easily replaced. The screen is essential in order to soften the confusing brilliancy of the lines exposed by the needle.

Requisites for Biting

For the Biting:—Mordant, a porcelain tray, stopping out varnish, Brunswick black, some small soft brushes for stopping out, several sheets of blotting paper, soft rags, two or three feathers, a handy supply of water in, say, a basin, and a towel.

Trays

Stopping-out Varnish

Brunswick Black

Mordants are referred to later. For a porcelain tray or trays I keep three or four of different sizes and prefer the sort used in photography. The bottle of stopping out varnish should be kept well corked when not in use, by which I mean in the intervals of employment as well as when put away. Apart from the biting, the varnish will be required during the drawing for correcting mistakes, alterations, accidental scratching or rubbing of the ground, protecting the bare space left by the vice, the edges of the plate and for stopping out any likely "pitting" *before* biting. The back of the plate can be protected with a coat of quick drying Brunswick black spread on with a cheap brush (a gum brush will serve), which should be washed out in turpentine immediately afterwards.

Requisites for Additional Work

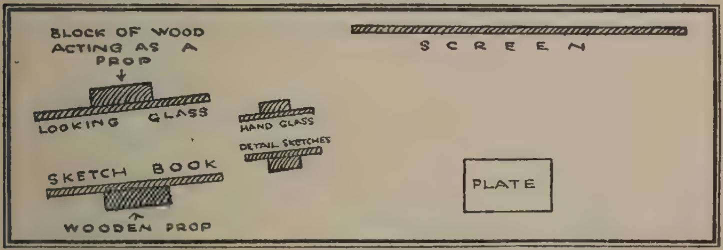
For additional work generally:—A dry point, scraper and burnisher, some finest emery paper and powder, a roller for regrounding, a dabber for same, some dark coloured or black grease (tallow mixed with lamp black is as good as anything), charcoal. Other materials will be required for auxiliary processes.

For all the work:—An average amount of ingenuity, plenty of confidence, some patience—the American "some."

DRAWING ON THE PLATE

Use of Mirror

The first consideration is the fixing up of the screen, the mirror and the drawing—an original sketch shall be assumed—which has to be copied on the plate. A little of the recommended ingenuity may be employed here in arranging the screen in such a way as to soften the light on the brilliant and—to the beginner—somewhat deceptive lines exposed on the copper, and also in placing the mirror and the sketch where it is possible to get a close, clear and full view of the latter in the former. Level with the left elbow is my preference. Have a broad soft brush ready for carefully removing the threads of etching ground taken up by the needle and also a pad of tissue paper for resting the hand upon. These details being comfortably settled, commence drawing with the needle and *do not be afraid of it*. Hold it as upright as you can without stiffness and, aiming



at simplicity, let it travel with freedom and confidence. Timidity will lead to niggling and that to hesitating broken lines, and then, if the opinion of an experienced friend is ventured upon this effort, the abruptly truthful but not ungracious judgment "rotten" may come as a shock, though it is but the term applied to lines presenting unbitten spaces owing to discontinuity, a fault to be particularly avoided in etching. Mistakes must be expected and will be made, but as a rule they can be corrected; whereas gaps in possibly half a plate or more of discontinuous lines cannot be joined up with much hope of success. Therefore make sure the copper is *quite* exposed. To *not* quite expose it is easier than one would imagine.

How to use the Needle

It is better at first to use one needle only, bearing in mind it should not be treated as if it were a pencil, *i.e.*, pressed hard for the darker parts with the danger of digging into the copper and lightly in the delicate parts with the probability of not reaching it. The plate, the acid and the proof resent this unequal kind of handling and do not fail to show it. It is, however, possible, given a continuously exposed line, to obtain gradation by an increase or decrease of pressure, but the beginner may ignore that and should try only for an *even* line trusting in what may appear at first a powerful, but is at the same time a propitiable adversary—the acid—to work out distinctions. So, keeping the foreground lines wider apart than those of the distance, go ahead and look forward to victory. If you will consider the needle an indispensable servant and, as its master, get it to do the work you require of it, but neither less nor more, you will soon find in it a valuable ally always ready to respond to your will and management. This applies also to the mordant.

An Experiment

I would suggest that before the copy is begun two small plates be prepared in the ordinary way to experiment upon in freedom of drawing, correct pressure, effect of biting and stopping out by filling up three equal spaces on each (leaving a narrow band between each space to distinguish them) with "slick" lines drawn right across the longest way, imagining the bottom space to be foreground, the centre mid distance and the top distance. One plate could remain at that. The bottom row of lines on the other could be crosshatched at right angles, the middle diagonally one way and the top diagonally opposite ways. Both plates could then be bitten 10 minutes, the top space stopped out and a further 15 minutes (=25) biting given when the middle space might be stopped out and the remaining space bitten 20 minutes more (=45). The plates could then be cleaned off and possibly something learned from all this extra trouble, perhaps the value of patience included.

THE BITING

So far the work has been done in the light. It will now have to be done partly in the dark so to speak and consequently by cautiously feeling the way during this engaging branch of the operations which demands the greatest attention and care. There are a few important conditions governing the biting which may first be drawn attention to.

Conditions Governing 'Biting'

Biting should be simultaneous.

Isolated lines and those drawn far apart bite more slowly than those close together, therefore the latter do not require the same length of biting as the others.

Effect of Temperature

Temperature has a great effect on the acid. In hot weather it acts rapidly; in cold, a mordant of the same strength would take very much longer to get the same results.

The acid should bite deeply rather than broadly. Lines can of course be broadened where necessary. Nitric acid (used chiefly as an auxiliary) would accomplish this. On the other hand the Dutch mordant, so justly praised by etchers and so fully detailed as to make and advantages by Mr. Hamerton, bites as a mordant should, in a deep and narrow line. Rhind's English mordant, which I largely use, does the same.

Hamerton's Dutch Mordant

Mr. Hamerton explains the Dutch mordant as follows:—

Chlorate of potash	20 grammes.
Hydrochloric acid	100 grammes.
Water	880 grammes.
Total	1000 grammes = 1 Litre*

"First heat the water by putting the bottle containing it into a pan also containing water and keep it on the fire till that in the pan boils. Now add the chlorate of potash and see that every crystal of it is dissolved. Shake the bottle to help the solution. When no more crystals are to be seen you may add the hydrochloric acid. Make a good quantity of this mordant at once so as to always have a plentiful supply, but remember freezing weakens it permanently."

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* 1 Litre = 0·8799 quart.

Strength of Acid

Strength of the acid must be taken into consideration. As it gets weaker by frequent bitings, it acts more slowly till at last it may stop altogether, as Mr. Hamerton explains, "by allowing the mordant to remain long undisturbed on the copper a coat of oxide gets formed which is not dissolved as the acid solvent is weakened." To remedy this, he adds, "wash the plate with water, passing a soft brush about the work or a rinse of a weak solution of nitric acid and water will make the mordant attack it well again."

Removal of Bubbles

Great care should be taken to watch the ebullition and to remove continually the bubbles with a feather, otherwise the lines will be unevenly bitten as the acid will not touch the copper where the bubbles are, and in the proof numbers of little white dots or spaces will appear. The Dutch mordant acts slowly, without ebullition and darkens the lines.

Preliminary Stopping-Out

Before placing the plate in the acid bath examine it carefully with a strong lens for signs of "pitting" which must be stopped out, together with accidental scratches, rubbings, mistakes in drawing, etc., and in fact wherever the acid is not intended to introduce itself. The back and edges can be protected with Brunswick black. Then wait till all is thoroughly dry.

Protecting Back of Plate

My method is to cut four small pieces of cork about half an inch thick and to lay the plate face downwards on these with the corners just resting on them. Then having covered the back *over night* with Brunswick black by means of a common new or clean brush such as is used for "stickphast" or gum, I put the plate, corks and the board they rest on in a box or drawer to dry. The next morning all the stopping out required to the front is done with a fine camel hair brush. It is easy to see when the varnish is thoroughly dry by breathing on it. It will then be dull in appearance, but if it shines anywhere that part would not resist the acid.

Suggestions as to the length of each biting would be superfluous. Indeed they are not possible to give for various reasons of which the temperature of the room and the strength of the acid are not the least important. "Mechanical timing is useless. Failure in biting arises much more from not knowing how wide or deep you *ought* to bite your lines than from any of the difficulties of judging the bitten line before the ground is removed." Thus writes Professor Herkomer. When in your opinion the lightest parts have been sufficiently bitten the plate can be taken out of the bath, well rinsed in clean water, laid on its back on some blotting paper and the etched surface dried by more sheets of blotting paper being carefully pressed upon it.

Removing Plate from Bath

Personally I am no believer in contrivances for lifting the plate into or out of the acid. I always use my naked fingers for doing both and they have never yet come to any harm by so doing. The only precaution to take is not to allow a chance wound, however insignificant, to come in contact with the fluid and to dip the hands in water as soon as possible after each operation.

How to Judge Depth of Lines

The depth of lines whilst biting is in progress can be judged either by touching them with a point (one that does not matter and can easily be replaced, as the acid will ruin it) or by examination with a powerful magnifying glass. It is not wise to carry a plate through its various stages trusting to the naked eye, however good the sight, as many deceptive and to all appearance non-existent defects are only discoverable by the aid of the lens. I would warn the beginner of an often unforseen danger in removing the ground for the purpose of inspecting bitten lines. If there happens to be too much turpentine in the brush, the superfluous amount will suddenly descend in a "blob" which may flow along lines not yet ready for so unwelcome an inundation before blotting up, however hurried, can save the ground on the parts affected. Often, in lieu of a brush I use the corner of a small piece of blotting paper folded fourfold or the point of a crayon stump, dipped of course in turpentine. In this way the exact amount of ground desired to be removed can be rubbed off. This, however, is more suitable for very small portions in intricate parts of the plate. Taking off ground for inspection of work is about as delicate an operation as stopping out some or the lines may be prematurely exposed.

Cleaning the Plate

Continue biting, with not too many stoppings out, till the darkest parts are deep enough. If the mordant weakens before this stage is reached a little pure acid may be added to it as the boldest lines require good strength of biting. Frequent stoppings out will rarely secure gradation. The best way is to stop out not more than two or three times before cleaning off, taking a proof and then regrounding for further work. When altogether finished clean off the plate thoroughly with turpentine and it is then ready for a complete proof to be taken. Doubtless it will still be found to demand further assistance to finality by rebiting underbitten or reducing overbitten parts, dry point additions and so forth, but these subjects are explained elsewhere.

I will neither be so discourteous as to predict failure of the initial effort, nor so optimistic as to prophesy success, but I think, after some experience is gained, the beginner will admit that in the art of etching, if success is a master in encouragement, failure is a very proficient tutor in the knowledge of its technicalities.

AGE & YOUTH (DRYPOINT). BY PERCY SMITH.

SOME NOTES ON DRYPOINT

BY PERCY SMITH

SOME NOTES ON DRYPOINT

What is Drypoint?

The technique of drypoint is very simple indeed. It consists of scratching lines on a smooth metal plate with a sharp pointed needle, and printing direct from that surface. The name probably arose because no intervention of liquid, taking the form of acid to eat the lines, is necessary.

Probable Origin of Name

Technique and Theory

I perceive that in telling of drypoint etching I shall not separate technique from theory, or talk of tools from talk of the sensations and ideas which direct their use. As life is a mixture of unmaterial needs such as love and hope, and of material but equally necessary needs, such as food and drink, so the practice of any art is a strangely mixed affair of wide imagination and sympathy and an interested attention to numerous very material details. The etcher must see his vision: he must also keep his tools sharpened and be a good workman.

Drypoint and Engraving

Since drypoint, like engraving, consists of working directly on the metal without the aid of acid to bite the line as in a bitten etching, the two are sometimes confused. But the difference is radical. For engraving, an entirely different shaped tool, known as the burin, is used. This is commonly pushed by considerable force from behind. A deliberate looking, slowly made and deep cut line, of the required width and sufficient to hold all the ink required, is the result. The slight burr thrown up on each side is removed before printing. For drypoint, the tool is held and used somewhat like an ordinary pencil, the line is more spontaneously and more quickly made, is much shallower—indeed it may be truly described as a scratch—and the burr is usually left and plays a vital part in the printed result.

Engraving

Drypoint

The Copper Plate

In an age of experiment copper maintains its position as the etcher's metal, and especially is this so for drypoint. Hammered copper plates, if well hammered, are better than rolled; old copper, unfortunately, better than new. I am treasuring two plates aged at least 60 years which are a delight to touch with the point. On the other hand, during the war, when nothing better was available, I used electrically deposited plates with success, though they were slightly gritty and necessitated constant sharpening of the needles.

Steel and Zinc

Steel, once used so largely for engraving, is too hard for drypoint; zinc, used sometimes for bitten etchings when broad lines and rough effect are wanted, is too soft. The burr wears down very quickly and the plate yields few good proofs.

As a note by the way, let me say it seems to me one should not be prevented from working by inferior materials, if such are inevitable, or by the absence of desirable paraphernalia; or even by the utmost inconvenience of environment. Get the best available, and hope for better. The war taught many of us how work could be done with few appliances, and in "unhealthy" atmosphere. The worker should dominate his tools.

Preparation of Plate

Work may be done direct on the bare copper without preparation of the surface, or the plate may be waxed and smoked as described on pages 38 and 39. To wax the plates beforehand is wise if carrying them about on tour; it gives some protection against the weather and possible dampness. An advantage of the smoking is that the scratched line shows more clearly than on the bare copper. This is distinctly helpful, especially so for any approach to detail drawing, though for reasons which will be apparent later, drypoint is rarely chosen, and still more rarely suitable, for such treatment.

Advantages of a Ground

A second advantage of a ground is that it facilitates the successful making of a drawing on the plate previous to etching. But in the practice of so spontaneous an art as drypoint etching an exact drawing is felt by most etchers to be a hindrance, and even for relatively large plates and complicated subjects, into the merits and demerits of which I do not purpose to enter here, a simple blocking of the main masses and lines is all that is needed. A soft pencil may be used on bare copper: water colour paint and a fine brush if the plate is grounded. Both may be cleaned off, with rubber or water respectively, if desired.

Despite the "advanced" knowledge of these days, it is well to say that even in a portrait study of a head there is "design," and the best method, it seems to me, is to indicate the main lines of the design, the rhythm of the pattern, direct on to the smoked plate with a needle, used very lightly and held nearly upright so as not to raise appreciable burr. Or if preferred an ordinary etching needle may be used. This will simply remove the ground, leaving a clear, bright line, but without making any serious mark in the copper, thus allowing greater latitude for revision. My personal preference, however, is to decide what one wants to do, and then begin at once with a sharp cutting point. Apart from the pleasure the feel of the cut gives, the knowledge that from the beginning something permanent and real is growing beneath one's hand is inspiriting.

Needles

The only tools which need special mention in connection with drypoint, as different from bitten etching, are the needles. Since these are to cut a definite line in the copper they must be both sharper and stronger than the smooth-pointed, though fine, needles, intended only to cut through a wax ground. It is best that the needles be of solid steel, these are stronger and more reliable than the generality of points which are fixed in handles. Good steel is very desirable. I have some engineers' centre punches, sharpened to the required point, which serve splendidly. They can be obtained reasonably thin, and be sharpened to a delicate point, for light lines, and thick, for a stronger point to be used for deep lines. Old and cast off dentists' pointers should also be treasured. They are usually of excellent steel. A workman may do well to collect his tools from a so-called rubbish heap, rather than from a resplendent shop, where newly polished points rest on velvet cushions. For the old steel, which, after passing through the test of time, still exists, has proved its quality; the new steel can give no such guarantee. Both diamond and ruby points are also used for drypoint, and for delicate work give a delightfully fresh, sensitive line.

Diamond & Ruby Points

A round, sharp point, long and fine for delicate lines, shorter and therefore stronger for strong lines, I have found to be very convenient. It penetrates the copper with ease and throws up a fair amount of burr. A point flattened on both sides and slightly rounded, but kept very sharp, throws up more burr and is very useful for strong work. But the necessity of holding and using the flat cutting edge in the direction of the desired line makes it less free in handling.

In all matters relating to Art, as in all matters relating to life itself, rules are best considered as wrought iron, which bends, rather than as cast iron, which does not bend, and an etcher may surely hold his tool as he pleases, the only test of its rightness, for him, being the result. But the usual method is to hold the needle in the same manner as a lead pencil. Sometimes, especially when great depth of line is wanted, it may be held between the first and second finger, with the shaft resting between them and bearing well back for support, and the point supported by the thumb underneath. As in pencil work, pressure is used according to the strength of line desired.

How the Drypoint is held

The "burr" is the rough ridge of copper displaced and thrown up by the action of the cutting tool. The amount of burr thus caused is regulated not only by the pressure and energy with which the line is made, but even more by the angle at which the needle is held in relation to the plate. Held at a considerable slope, a substantial burr is thrown up on the opposite side, and only a very slight amount on the near or under side. If the needle is held upright the burr is evenly distributed on both sides of the line.

The "Burr"

The actual scratch made on the copper with the drypoint tool is shallow when compared with a corresponding acid-eaten line. It is the accumulation of ink against the burr which gives width and depth. With the burr removed, a fine drypoint line prints with a tenderness and delicacy exceeding even that of the etched line. With a strong burr it has greater richness.

The lines are usually drawn freely and quickly. It follows that because of the resistance of the copper it is more natural to make them somewhat straight, than sharply curved. Hence shapely or academic draughtsmanship of form is foreign to the medium. To attempt

Peculiarities of a Drypoint Line

such it is necessary to work slowly and in the spirit of the engraver.

The glory of the drypoint line, with its natural burr, is the range and illusiveness of its power. It can be dramatic and yet at the same time sensitive. Often it has no edge. Its dramatic power clothes it with a force, possessed, it seems to me, by no other line: charcoal probably comes nearest to it in intensity. It is replete with that quality which artists know as "feeling" Its indefiniteness endows it with mystery. The sensitive response to the gentlest conceivable touch of the tool on the copper, the veil of burr, gives it the rare quality of infinity.

Removing the Burr

The line being shallow, erasure is easier than in a bitten etching. Should this unfortunate necessity arise the procedure is that described in the chapter on "Supplementary Processes." When desired the burr only may be removed, with a very sharp scraper, by diagonal scrapes across and in the direction of the line. This is sometimes done, and rightly done, when very clear lines are wanted. The burr may also be lessened, by judicious scraping, if discovered to hold too much ink when printing. But the workmanlike thing to do is so to control the line and the amount of burr raised as to make reduction unnecessary. To reduce always carries with it some loss of quality. To use a burnisher to remove or reduce burr is wrong, as the ridge of copper is simply pushed down into the scratched lines.

Reducing the Burr

Drypoint used with Bitten Work

Drypoint work is frequently added to plates previously bitten with acid. It may be used to throw a veil of shade, of richness, of mystery, of atmosphere, over a ground work of etched lines. More frequently it serves the purpose of added reinforcement here and there, where the etcher considers additional strokes or 'colour' is needed. Drypoint lines with the burr removed harmonise with fine etched lines, and are often used for sky or distance, or wherever delicate work is needed. They do not unite so well with strongly bitten lines: being, with the burr, essentially different in nature, and without the burr, relatively weak and shallow. The advisability of mixing the two methods must be, it seems to me, a matter for each etcher to settle for himself. Its justification rests upon the successful result.

Further Peculiarities of Drypoint

To an observer, the manner of making a drypoint appears much the same as that used in what is commonly known as making a sketch. It is an essentially spontaneous and apparently loose technique, as compared, for example, with wood engraving, in which the material, and manner of using the tool, imposes greater restrictions and lessened speed of work. Mainly through this spontaneity a sense of vitality, the essential characteristic of a sketch, is won.

To say of drypoint that it is organic is simply to say what is true of all authentic art. Yet in the clash of the point against the copper there is a sensation of dealing with elemental forces, the hardness of metal is in opposition to the desire which controls the needle. A definite feeling of force is present. The tool penetrates. An idea is really being given tangible expression despite resistance. It is a kind of sculpture.

This sense of digging out, sometimes with passionate intensity, sometimes with delicate enjoyment, is a technical as well as an emotional fact, and it adds depth, and force and feeling to the free waywardness of the drypoint. It helps to make it a full-blooded art. The variety of the line, from utmost tenderness to dramatic passion, the mystery shed over it by the gathering of the ink round the burr, help to give the quality of infinity.

It is always good to feel a certain reserve in a work of art, so that one realises the whole is not put forth, or there is more in it than at first appears. This quality is characteristic of drypoint. It suggests rather than actually delineates. Its technique forces selection. It is an abstract: for nature, on which all lasting art must, though in a liberal sense, be based, is not composed of lines, and, we have at long last learned, is not to be imitated.

This is all I propose to say. The achievement of Rembrandt is witness that I have not overstated the possibilities of this craft. I set them high, because I believe them to be high. As a workman in the medium, enthusiasm is permitted; but it would be immodest, if not weak, to exaggerate its powers, and I hope none will think I have done so. I have not.

That he who appreciates sets his standard high is to the great gain of the craft, and not detrimental to the best interests of any, and we who make doing our end are thereby encouraged to see and execute the more truly.

A CANAL: VENICE (AQUATINT).

BY S. LANGDALE.

HOW AQUATINTS ARE MADE

BY STELLA LANGDALE

HOW AQUATINTS ARE MADE

Limits of Aquatint

The process of aquatint is essentially for those who see compositions in mass rather than in line, and whose sense of tone is adequately developed. To anyone about to take up this process it would be helpful first to make several drawings in charcoal, selecting simple subjects and treating them in the most simple way. Having obtained a satisfactory drawing keep it before you while working on the plate.

The Zinc Plate

I have always employed zinc and found it more satisfactory than copper. A great artist in aquatint advised me always to use the same metal and I have found it good advice for many reasons. Most ironmongers can supply one with pieces of sheet zinc, but in selecting be careful to avoid plate zinc which is thicker, but of no use, as the acid seems only to burn it in patches.

Polishing the Plate

An electrical engineer will probably polish your plates for you, but, if this is impossible, you can clean them sufficiently for your purpose, using a coarse emery paper to start with, then a medium texture, and lastly the finest you can procure. A piece of oil paper will take away any fine scratches, especially if for this last polish you employ a circular movement.

Flaws in the Metal

In the scraps of sheet zinc many little flaws and dents will be found. These cannot be remedied. There are several to be seen in the sky and in the water on my plate here reproduced. To a great extent you can arrange your work so that they are lost in a shadow or occur on some rough ground where the black specks will not be noticeable.

Cleaning the Plate

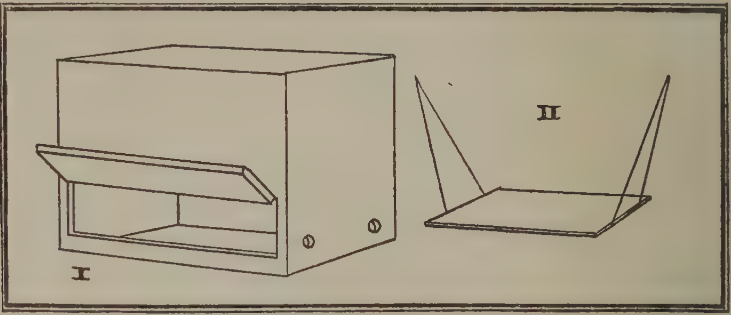
Having polished the plate, clean it with turpentine and it is ready for grounding. Mummy or resin dust can be employed.

Grounding

The resin leaves a white ground, so that if one sketches lightly on the surface with a soft lead pencil it is easier to see than had it been on a

The Dusting Box

dark brown ground. Any carpenter can make a dusting box (see diagram 1), at least one good enough for first experiments. It should be from 18 to 20 inches square: inside, on its floor, a tiny platform of wood about an inch high and 7 or 8 inches square. The opening must be the length of the box, with a well fitting door. Three or four holes about an inch in diameter are necessary along the lowest edges of the box—into which one can insert the bellows for blowing up the resin dust—and all cracks and joins should be pasted over with brown paper.



Powdered Resin

The powdered resin can be obtained from any large firm of artists' colourmen: it is as well to have at least a quarter of a pound on the floor of the box. Have your plate ready to hand, and

Laying the Ground

having obtained a good cloud of dust by the aid of the bellows, open the door and place your plate on the little platform inside the box. Shut the door, leaving the dust to settle for five minutes and on opening the door you will find your plate covered with an evenly distributed resin dust. Lift it by placing the tips of the fingers underneath the plate, the greatest care being

Fixing the Ground

Protecting the Back

taken not to disturb the ground. To fix it, place it on a heater over a gas ring—in a good light. In a few minutes the dust scarcely shows and the plate looks in almost the same condition as before grounding. In fixing it is better to have less heat and allow more time, for if there is too much heat and you are too slow, the resin may run. On the other hand if it is taken away before completely fixed the acid will bite into your plate—so that in this part of the operation a good light is necessary in order to watch for the change in the appearance of the plate's surface. When quite cold, place the zinc face downwards on a piece of clean paper and japan the back (to protect the zinc). See that the japan does not run over the edges of the plate, for wherever it touches the acid will not bite. If you are in a hurry, protect it instead with stopping out varnish which will dry in a few minutes.

The Acid Bath

While it is drying you can prepare the nitric acid bath, for which a good sized porcelain dish is best, such as photographers use. One part acid to ~~two~~ parts water is sufficient. For many reasons—atmospheric among others—it is better to have a small piece of waste zinc, unprepared will do as well—to try the strength of your acid. Small bubbles will collect rapidly in less than a minute—and for the first experiments it may be wiser to add a little more water—but this is the correct result. Have a large feather quill with which you can brush the bubbles off the surface of the plate, so that the acid may bite well. Do not forget that nitric acid burns not only zinc but also skin and clothes. Have ready another dish full of water, into which you can put your plate if it is biting too rapidly. When you wish to immerse the plate into the nitric, a very convenient way is to put it on a double piece of fine string—which can be safely held at the ends (diagram 2).

The Drawing

Drying the Plate

Cleaning the Plate

By this time the back of your plate will be dry. Sketch your drawing—reversed—with a very soft black pencil, taking care not to scratch your ground. In the plate reproduced, I stopped out the lights, then I lowered half the plate, to the horizon, into the bath, withdrawing it as soon as it had begun to bite—but gradually so that it should be slightly darker at the top. The sky was next stopped out, and the lower half of the plate immersed into the nitric, giving it more time to bite than the top half. The next stopping out included the middle tones, and the reflection of the sky in the water. Lastly all but the heaviest darks were stopped out. After every immersion, in order to dry the plate, blot it gently with blotting paper, avoiding rubbing. After the last biting, clean off the varnish with turpentine and print your result. Remember there are nearly always corrections to be made, and if you are doubtful half way through a plate it pays better to clean it half done, and reground it—rather than work on feeling undecided.

The use of 'Failures'

Hamerton advises correcting plates a little, but, if they do not come right with a reasonable amount of trouble, to have them repolished. I think it wiser to put away first attempts until some experience has been gained: it is extraordinary how first plates, perhaps unsuccessful, can be made something of when you have gained some experience with the scraper and burnisher.

"You will have many a hard battle, many an hour of mortification, but let me tell you all good etchers have passed through these ordeals and been dirty with charcoal and oil and printing ink, and burnt their skin with acid, and spent hours and days in rubbing and scraping and correcting, often with no immediate result except utter disappointment."

1929

Summer Night:
By Hugh Paton, A.R.E.

SUPPLEMENTARY PROCESSES: SOFT GROUND, MEZZOTINT, ETC.

BY HUGH PATON, A.R.E.

SUPPLEMENTARY PROCESSES: SOFT GROUND, MEZZOTINT, ETC.

SOFT GROUND ETCHING

Soft Ground Etching

Of the Supplementary Processes occasionally used by the etcher, whether for their own special qualities, or for the touching up of other kinds, soft ground etching seems naturally to come first. It is the nearest to the ordinary etching in line; etching as distinct from aquatint, which is a tone process of biting, as already described. The process is the same in some respects as in etching, but the quality of the line is different, and the drawing is made in a different way. The ordinary etching ground is relatively hard, and for soft ground a ball of it is mixed with an equal bulk of tallow, the ball being melted in the pot used for making it, and the tallow thoroughly incorporated with it. The mixture is then poured into tepid water, some being splashed over the top, and, as it begins to cool, it is rolled between the palms into a couple of balls. These may be wrapped in pieces of taffeta silk, as is usually recommended, though I rather think the practice to be objectionable on the score of dust. I prefer to wrap the ball in clean paper, and to use it bare.

The Special Ground

I have no doubt that the soft ground can be obtained from the makers of etching grounds, but I have always preferred to make my own.

Laying the Ground

To lay the ground, the plate is heated sufficiently to melt it, as it is passed back and forward, along and across, in somewhat open lines, the whole being then made equal and smooth with the ordinary dabber, or the ball of the thumb. It is then smoked as in etching. For the making of the drawing, the plate is covered

Making the Drawing

with a sheet of fine tissue, or other thin paper, with a grain in it. This may be lightly damped, the plate laid upon it, and the edges, which should be sufficient to fold well over, fastened down on the back. When dry it gives a firm surface to draw upon.

Now, in ordinary etching, one depends upon the length of various bitings for the different degrees of strength in the line work, but in the present case the whole of the drawing is made with a hardish pencil, made rather sharp, but not too cutting on the very point, lest it tear the tissue paper; exactly as if one were drawing from nature in the sketch book, that is to say, hard, or medium, or light, as the subject requires. Light shading may be thrown across strong lines, as in the pencil sketch. When the tissue is removed, which must be done with care, on account of the softness of the ground, the paper brings away the ground, in varying degrees according to the pressure, and one sees a negative of the subject, copper colour against black, approximately as it will appear in the print. Only one biting is necessary, the strongly drawn lines biting vigorously, and the finer ones lightly, exactly in accordance with the varying pressure of the pencil. A short biting may suffice; with the acid working briskly, a quarter of an hour will give darks as strong, or almost as strong, as one would obtain in etching with double the time allowed. The broken character of the line exposes more copper, and the softer ground gives more readily. If the light grey effect of the pencil drawing be sought for, the biting should be short and shallow, but there is a fine rich quality about the soft

Removing the Tissue

Biting

ground line when bitten vigorously, and one need not stop at the lighter effect.

Precautions

Very great care must be exercised to avoid touching the ground, for it is extremely sensitive, much more so than the etching ground; but any accidental damages, or wrong lines, and especially the rubbed edges of the plate, may be stopped out in the usual way. The adding of work to the plate afterwards may be done as in etching, by re-grounding and smoking, as before, but the drawing should be made as complete as possible *au premier coup*, for it is difficult to replace the tissue paper by the plate marks with absolute exactness; the adding of shading to a mass is not difficult, but the touching up of a fine outline is usually very unsatisfactory, the difference of a thirty second of an inch even, in joining up, being noticeable.

The drawing can, of course, be done direct from nature as freely on a soft ground plate as in the sketch book; but the ground is so sensitive to changes in temperature, say on a summer day, that the process is best carried out indoors. A slight outline drawing may be made upon the tissue beforehand, but great care must be taken in that case to go over it all, when drawing on the plate, or confusion will arise and show unsatisfactorily in the print. When it is desired to reverse the subject on the plate, in order that it may print the right way about, an outline sketch may be made upon the paper with a fine pen, the ink being dark enough to show through, and with the paper turned face down on the plate, the desired result will be obtained. With the masses clearly indicated, there is no difficulty in filling in shading right for left.

Reversing Subject

A further Precaution

Before lifting the tissue from the plate after the first drawing, the corners of the latter should be carefully marked on it, for convenience of replacing it if required. With this precaution, the danger of not replacing it exactly is reduced to a minimum.

Effect of temperature on ground

A note of warning should be sounded here, to the effect that the ground, as described, is suitable for a temperature of about 66 degrees Fahr.; for winter use, except in a well warmed room, the proportion of tallow should be increased a trifle.

Too rapid biting

The biting should be carefully watched, for with all the care in the world a little too much emphasis is sometimes given here and there in the drawing. Should any parts appear to be biting too strongly for the rest—and they are generally isolated touches—the plate should be taken out of the acid, when the parts in question have gone far enough, washed in water, and laid aside to dry. *Stopping out* The sufficiently bitten work can then be stopped out, and the plate again submitted to the mordant for the few minutes still required.

Peculiarities of Soft Ground Etching

The charm of soft ground is that it reproduces the broken crumbly quality of the pencil line, resembling lithography in this respect. A line of this character makes an appeal of its own.

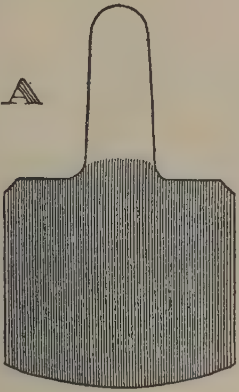
MEZZOTINT

Mezzotint

Mezzotint is not etching in any sense; it is not a process of biting with acid. But most etchers, with all the materials beside them, plates, press, and so on, experiment with it at some time or other. Besides, it is sometimes useful as an auxiliary. A brief description of it may therefore be useful here.

The "rocker"

The copper plate is grounded with a rocking tool, A



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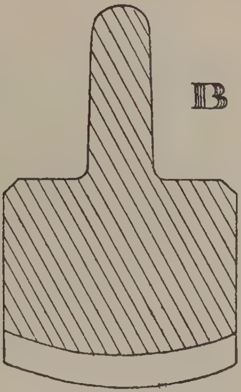

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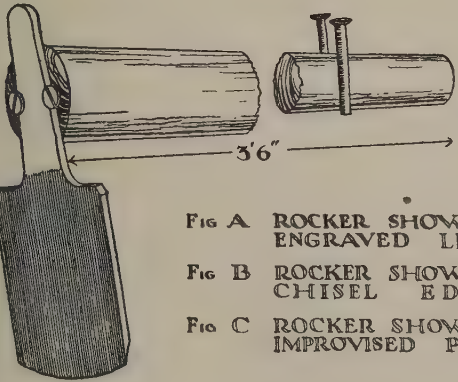

Fig A ROCKER SHOWING ENGRAVED LINES

Fig B ROCKER SHOWING CHISEL EDGE

Fig C ROCKER SHOWING IMPROVISED POLE

or "rocker," in the shape of a short broad chisel, two and a half inches wide, and rounded at the end. One side of this is engraved with fine lines, from forty up to, I believe, a hundred and fifty to the inch, running down the length of the tool. My rocker is sixty lines to the inch, and is a good useful size for general practice. The other side is sharpened in the same way as an ordinary chisel, at an acute angle, with the result that the chiselled end is fringed with a row of tiny teeth, corresponding to the number of lines. With this tool fastened in a rocking pole, somewhat in the manner of an adze on its shaft, the round end is rocked on the plate, each tooth as it bites the copper making a shallow hole, and throwing up an edge, or burr. With the tool turned slightly inwards towards the pole, the slight inclination causes it to travel forward at every stroke, in a series of zigzag lines at a very acute angle. When one has worked across the plate, there is a clearly perceptible broad row of tooth points. The plate must be rocked all over in the same direction, and the tool set at a fresh angle, the process being repeated until it has been covered completely some sixty or eighty times, in every possible direction, so that there is no trace of the pure copper to be seen. It will then print an absolutely rich black. The design is then traced on the plate, and the burr removed by the scraper, to a greater or less degree according to the amount of light required. Pure high lights must be burnished out, when the scraper has removed all the burr.

Use of "rocker"

Tracing the design

Use of scraper and burnisher

Such, in brief, is the process of mezzotint, the plate being printed in the usual way, common to all engraved work.

Rocking pole

The rocking pole is made by several of the firms which cater for the worker in mezzotint, and it is a somewhat elaborate affair, with brass fittings, costing from three to six guineas. That was before the war; the six guinea set would probably be ten by now, if not more. In my own experiments I used a broom handle, and it answered the purpose perfectly. With the rocker end cut at a slight inclination from the perpendicular, the tool is held by a couple of screw nails, half a turn of one with the screw-driver being sufficient to fix it, or to release it, when it is put away as it must be for fear of rust. It should be well wrapped up. The heads of the two nails hold the narrow handle of the tool firmly. The outer end of the pole works between a couple of ordinary nails knocked into the table, at the right hand edge, with just space enough between them to allow of the pole moving easily forward. The rocking, of course, is somewhat monotonous, and it takes time, but it presents no real difficulty, and it can be done at intervals of other work. The hand should rest lightly on the pole, and the tool travels forward of its own accord. I may add that for an experiment, forty times rocking of the plate is quite good, but for serious work, at least sixty times is desirable.

An improvised rocking pole

Fig. A shows one side of the Rocker, with the engraved lines, and Fig. B the other side, with the chisel edge. In Fig. C is shown the improvised pole. The inward slope of the tool is about right in the illustration. I have not the proper pole, with its brass fittings, as I have only touched this process on occasion, and have not found any need of it; but for regular and serious work it is certainly advisable.

GLASS PAPER MEZZOTINT

Glass paper Mezzotint

Glass paper mezzotint is a pet subject of mine, being a discovery of my own. More probably it is a rediscovery, but it came about in this wise. Some twenty-five or thirty years ago, an exhibition of Arts and Crafts was announced to be held at the Manchester City Art Gallery, and it occurred to me that an exhibit of copper plates, with prints alongside them, would be suitable and interesting. I had been etching for some years then, and had done some drypoint, but I had not touched the tone processes, either in aquatint or mezzotint. The expense of the tool for the latter was sufficient to make me hesitate, in the character of "the poor artist," in case it should, after all, prove to be not worth while. I puzzled over the idea of some other and cheaper method of obtaining a suitable ground on the plate, even going the length of getting a small roller made for my press, with the surface engraved after the manner of a file, but the engraving was not done as I wanted it, and it was a failure. One day it occured to me to try the experiment of passing the plate through the press with a sheet of glass paper upon it, and a trial was entirely successful, at the cost of half a dozen sheets of the paper, and twenty minutes or so of time. The particles of glass are not round grains, but sharp splinters, and these indent the plate with innumerable small holes, with some amount of burr perhaps. The result gives in the print a perfectly dense black. Proceeding with the scraper in the manner as for mezzotint, I got quite a good result. There

Use of scraper

is less burr proper than in the tooled ground, more and harder scraping being required, and in the high lights there is greater difficulty in getting down to pure white, for the larger of the glass splinters, which are by no means of equal size, make occasional deep triangular holes, and these interfere with the purity desired at times. But in a broad way, the result is quite good. The black is not quite so rich, and the whites not quite so pure, as in the *manière noire*, but for the purpose of the amateur the process is as satisfactory as it is interesting. With the aid of the glass paper plate, I was able to send an exhibit; for which, by the way, I was awarded one of the forty medals given. I did not take up aquatint till later.

The idea was quite in the nature of a happy thought and I have concluded since that I may have seen some reference to a method used by the late Professor Legros; but fortunately I had forgotten the details, and I used the glass paper in a different way. I afterwards wrote to him on the subject and ascertained from him that he had sometimes used glass paper to obtain a light tone on a plate, by passing it through the press once only, the plate having been grounded as for etching. The acid bit into the minute holes made in the ground by the glass particles, and a short biting only was given. He had not used the glass paper to obtain a solid dark ground as substitute for that of mezzotint.

Effect of Steel facing

Since this chapter was written, I have seen the prints from the plate, and have been much disappointed with the result of the steel facing. This, of course, is necessary when an edition has to be printed, and, while it is acknowledged that the steeling has some effect on the lines, the difference, when the steeling has been carefully done, is so slight as to be almost imperceptible. The print from this plate, however, is quite flat, compared with one from the bare copper, and I am afraid that the tendency of the steeling has been to fill the interstices to a greater extent than in the case of a line etching; certainly the difference is more noticeable in the tone process. Had the point been anticipated, the middle, rather than the fine glass paper, would have been used. The reader will please allow for this, as there has been no opportunity to alter it.

MIXED PROCESSES

Mixed Processes

A short paragraph here on this subject may not be out of place. By the phrase I mean the use of two distinct processes on the same plate. The example of this which first jumps to the mind is that of the Liber Studiorum plates. Turner etched the outlines of the subject himself, and had the full tone carried out by experts in mezzotint engraving under his own directions. In aquatint, too, the other tone process of the worker on copper, an outline of the subject is sometimes bitten first, and the aquatinting done afterwards. In this case the outline is used chiefly as a guide for the tone work. A soft ground outline is also used sometimes to go with aquatint, especially for large vigorous work. In all these cases the two go well together.

Mezzotint and Etched line

Aquatint and Etched line

Aquatint and Soft Ground

Drypoint with Etched line

It is quite a common thing, again, for the etcher to use drypoint on an etched plate, in sky and distance, or for the throwing of a light tone over a strongly bitten passage, in short for light work, the method is extremely useful, the burr being removed. But the use of strong drypoint I consider undesirable; beside the straight-forward character of the etched line, the print of the heavy burr of the drypoint touches is so different that they do not seem to go well together. Heavy drypoint touches, with the burr removed, might do; but as the drypoint line has not the freedom of the line drawn in the wax it should be used with the greatest care. Although one may sometimes see apparent successes of the kind, I am inclined to think that, on the whole, a plate is best carried out in one process; it is at least homogeneous, and therefore satisfactory.

MONOTYPE

Monotype

Monotype is not a form of engraving at all; it is a method of amusing himself in an odd half hour, occasionally indulged in by the etcher by way of relaxation, when he has finished a bout of printing perhaps. It may be useful to some of our readers.

Removal of Ink

A fresh plate is taken and inked all over with the dabber, the ink being then removed by various means; wiped off with a fine wet rag on the finger and touched up with brushes, or high lights lifted off with an end of wood. The ink is removed in varying degrees on the same principle as the burr of the mezzotint plate, according to the design. The plate is then passed through the press in the usual way; but less pressure should be used, or the heavy darks will run into a blob. No great detail, of course, is possible; but for broad effects it has great possibilities, and when successful, for it is somewhat difficult to carry through well, the result may be very fine. The print is called a monotype for there is, of course, only the one. The design might be repeated but no two could be alike.

Printing a Monotype

I came across it in Florence in 1882. It was practised by a group of young American artists known as the "Duvenek Boys"; Frank Duvenek, who had returned to America then, having been their leader, while they were all together as students in Munich. They had done some very fine things among them. One gets the full force of the printer's ink on white paper, and sometimes on coloured, and while there is something of a sporting chance about it, one is well repaid when it comes off right.

Peculiar beauties of a Monotype

THE GELATINE DRYPOINT

Gelatine Drypoint

This is another process, of the sporting kind also in a way, which I picked up in Paris, many years later, in the studio of one of the same group of art students, J. C. Rolshaven. I saw several of them hung on the walls and I found that they were literally drypoints, but scratched with the usual point upon a sheet of thin gelatine such as is used for tracing purposes. The gelatine is inked and cleaned off, much as in the case of copper, and the sheet framed with a backing of white cardboard. They had all the effect of the genuine drypoint, and in a warm brown ink, which went well with the dusky yellow of the gelatine, the effect was wonderfully rich. There is only the one of each. It is not a print, but a separate drawing. Also, it is less sporting than the monotype; one can work with the precision of the genuine drypoint, and with ordinary care, the result is sure.

RE-TOUCHING

Re-touching

Some five and twenty years ago I went with D. Y. Cameron to the British Museum, and we spent an hour or two in looking over some boxes of Rembrandt prints.

Presently I remarked to my companion that those great old etchers had just the same technical troubles as we have still, and Cameron agreed with me. For we saw in several instances trial proofs showing damages in the plates, with others showing marks of the scraper and burnisher, which had been imperfectly erased, and finally the perfect prints. I do not know whether Cameron found the same encouragement in the fact as I did, but I think he must have done so. For a plate is seldom put through without accidental damages here and there. While the ground will stand the light touch of the finger it is sensitive to an accidental touch of any hard substance, such as the rolling of the needle across the plate (which often happens with me), or the touch of a warm hand, and the first proof will often show small damages where none was expected. It is said—I think of Turner in connection with one of the Liber Studiorum plates—that he converted a slight touch of this kind in the sky into a bird. I do not know if the idea was an original one, for it is a sufficiently obvious thing to do; the mere shape of a small curved line would immediately suggest it. At any rate, *si non e vero e ben trovato*. It has often been done since, and I plead guilty to having done it myself. But most damages, whether of this accidental sort, or due perhaps to want of foresight in biting a passage, which, on the plate being proved, was found to be a dark in the wrong place, or otherwise undesirable, must be removed altogether. And for their removal, the back of the plate must be knocked up with punch and light hammer on the anvil, the damage scraped out, and the surface re-polished.

Removing faulty passages

As an instance of how damages may arise, even after thirty odd years of practice, I went for my holiday last summer, prepared to do some etching, as usual, taking a supply of plates, etching ground, and other necessaries. Warned by experience, I filtered my bottle of ground before I left home, for the liquid ground requires filtering from time to time.* But I had not done it thoroughly, for I found afterwards a good many spots in the plate due to dust in the ground. They were of all sizes from a pin point to a large pin head, singly and in groups, constellations of stars in fact, and they had to be removed. With careful measurements and the spots marked on the back of the plate, they were knocked up with suitable punches, and the damages scaped out. After scraping, I think it better not to use the burnisher at first, but to erase the rough marks of the scraper with a piece of snakestone (for such small damages an end of slate pencil is more convenient: it is practically the same kind of stone), following upon this with fine charcoal and water, and finishing with the oil rubber. Such a spot, or a group of them, may be completely removed, and the plate restored to its pristine state, in a quarter of an hour. The burnisher may sometimes be used with advantage before the final polish from the oil rubber. It comes in useful also in other ways. Careful play with it on a line which is a little overbitten may reduce it sufficiently to print right, the tool being held practically flat with the plate. But this must be done carefully, for too much pressure, by crushing down the two edges of the line, is apt to result in a somewhat rotten line in the print, which is to be avoided.

"Filtering"

Use of Snakestone

Oil Rubber

Burnisher

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*See Page 39.

In such a case, unless the reduction desired be only slight, a careful treatment of the line with snakestone, followed by re-polishing, will be better; it reduces the line more evenly and leaves it cleaner in the print.

Re-grounding a Plate

It seldom happens that a plate is put through without the need of adding work to it, after a print has been taken, and the exact state of it ascertained. The plate is grounded again in the usual way; with the ball, however, for the liquid ground shrinks under the evaporation of the solvent, baring the two edges of the lines, at any rate of the strongly bitten ones, and the acid attacks these at once. The ball must be rubbed well into the etched work already on the plate, so that it may be protected from further action by the mordant. This properly done, any work can be added that is required and bitten as before. In the case of elaborate plates, when the etcher is perhaps feeling his way to a rich effect, it may be that the plate is regrounded and work added to it many times. When any considerable part of a plate requires erasure, all medium and strong work must be knocked up, and removed with the scraper and the space attacked boldly with snakestone until the lines are removed, finishing and polishing as before; the surface being made smooth with the dabber.

Strengthening Under-bitten Work.

A more ticklish problem than that of adding work to a plate is the strengthening of the etched work on an under-bitten one. It is a difficulty which frequently arises, owing to the tricky nature of the acid, especially when the nitric mordant is used. The difficulty lies in the need of re-grounding the plate without filling in the lines. To effect this, place the plate, and a spare plate beside it, on the heater; at a low heat, just sufficient to melt the ground. Rub a little of this on the spare plate and spread it about in an even film with the dabber. Then, with a touch or two of the dabber on the melted ground from time to time, apply it with a light hand all over the plate, or part of it, to be bitten up, and lay it aside to cool. When quite cold, the plate may be submitted again to the mordant for the length of time required. Carefully done, this will prove quite successful. The plate, of course, must be absolutely flat. If a trial print has been taken, and the plate be at all curved, it must be levelled by being passed through the press face downward, with a lighter pressure than before, with a cardboard under it to prevent damage to its face.

Laying Ground with Roller

But a safer method is found in the use of the roller. This is some four or five inches long, and two inches thick, covered with a surface of fine soft leather, the ends having a rounded corner, so that no definite edge of ground may be left on the plate. (See illustration of a roller in the chapter on Printing. Mine, however, is rather longer and thinner than the one in the illustration.) Proceeding as before, with some ground spread thinly on the spare plate, from which the roller should be kept evenly charged, two or three light passes over the plate to be bitten up, along and across, will effectually protect it, and there is less danger of the ground getting into the lines than by the dabber process.

The roller has other uses. It may be utilised instead of the dabber to make the ground thin and even, when re-grounding to add work; after, of course, the previous lines have been filled in with the ball of ground. And it may, on occasion, be used to ground the plate at the beginning, but this, of course, is only possible when one is at work in the studio and the heater is available. The etcher can hardly dispense with the use of the liquid ground when away from home on an etching trip. I had to work recently in a barn, when on a holiday, under conditions in which only the usual smoking with a taper was possible. But it was all that was needed for first grounding of plates. But I have, on some special occasion, grounded the plate for the first time with the roller, and it acts perfectly. After use, the roller should be thoroughly cleaned. It may be rubbed with the blunt edge of a palette knife to remove any superfluous ground, and then cleaned with paraffin, which helps to keep the leather soft. It must be put away carefully in a place that is free from dust.

Cleaning the Roller

Transparent ground is sometimes recommended for use with the roller, when re-grounding plates, to which work is to be added. But I have never seen the necessity for this. If the re-grounding be done with the usual ground in the ball is better—*and it be left unsmoked*, it will serve all purposes. The plate shows a tone darker than the natural copper, but it is quite transparent, and the former work is quite clearly visible.

I have been asked to explain the laying of a ground with the brush. But I have never done so, and I do not know its uses. In forty years I have never come across the process, though I think I have heard of it.*

"Trial Proofs"

The taking of many trial proofs leads incidentally to a curious result, namely, that the collector of prints makes a speciality of these "trial proofs," taken before the plate is finished, and snaps them up without regard to the fact that they are unfinished in the view of the artist, paying sometimes an absurdly enhanced price for imperfect work. The etcher should destroy all such as are not good enough to be retained, in order that they may not get into unscrupulous hands, and possibly damage such reputation as he may have gained, or may be aiming at, for good work.

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*See Appendix at end of Book

TWO WILLOWS.

By Reginald H. Green, A.R.E.

ON THE PRINTING OF ETCHINGS

BY REGINALD H. GREEN, A.R.E.

ON THE PRINTING OF ETCHINGS WITH SOME REMARKS ABOUT PAPER

The process of etching has a peculiar fascination of its own. This is due, I think, in a great degree to the fact that each plate is an adventure.

The unexpected so often happens. In painting, the artist, given good material and the training to use it, himself controls the processes which bring about the result. The etcher, however great his knowledge may be of the processes involved, sincere as he may be in his determination to owe nothing of success to accident, is dogged through the various processes of his work by forces over which he has not absolute control. This may result in exasperation and disappointment, but at any rate gives the excitement of adventure to his work.

And surely the culminating point is when the plate is put through the press for the first time. It is the point at which the treasure seekers, after much labour and many disappointments, plunge their spades into the ground to dig, to find treasure beyond their hopes—or bitter disappointment.

I think the greatest etchers must have felt this excitement when taking the first proof from a plate. We read of Whistler's tense excitement when proving his plates, and we may well believe that even Rembrandt, great master of the process as he was, must have found even greater treasures than he dreamt to find in those first proofs of his.

The "Etcher Printer"

The etcher who does not print his plates misses much. Probably his prints will miss much also. They will miss the individuality which alone he can give, even though he may not be an expert printer. The printing of etchings is as much part of the process as the making of them; it requires practice, experience, and a touch which may never be acquired, to make a really good print, although the process in its essence is simplicity itself. It is only fair to say that while it is the custom to disparage the work of the professional printer of etchings, there are professional printers who have great skill, and are indeed artists in the production of beautiful prints; but I think they would be the first to admit that the creator of the plate is the best printer of it, if he masters the art of printing as he should.

Professional Plate Printers

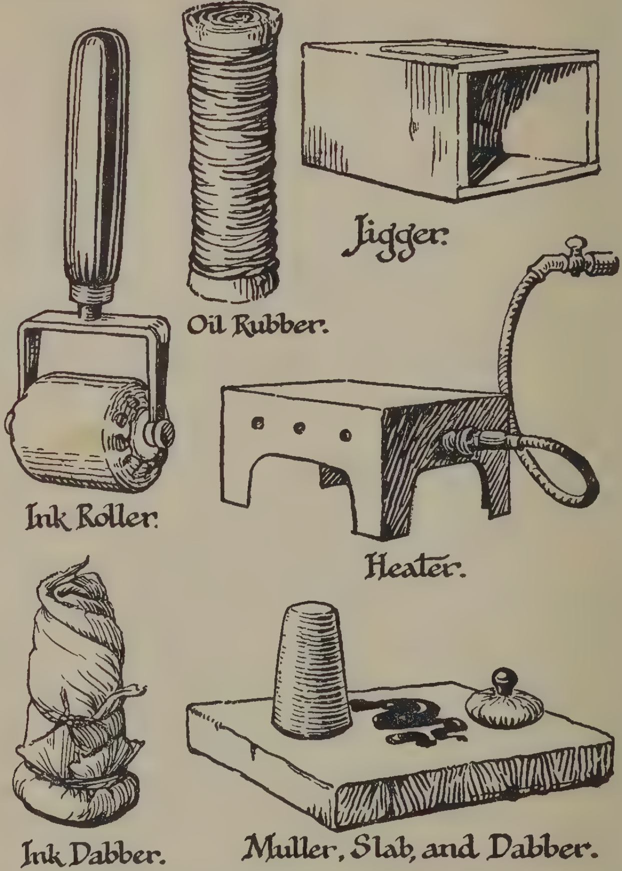
The Press

Unfortunately a printing press is a somewhat expensive part of the outfit of an etcher, particularly at the present day, and this may deter many a beginner from providing himself with one. It is sometimes possible to buy one second-hand through the advertisement columns of the various art papers. The amateur would be well advised to ask an experienced friend to examine it before purchasing. There are, or were, very small hand presses on the market at a moderate price, but unless the etcher is an amateur who is content to look upon the process as an interesting amusement only, I should not consider it true economy to buy one of these presses. It is impossible to obtain a really good proof from a small press, except in the case of very small plates.

Sooner or later, the student of etching will not be content with the "visiting-card" plate. He will wish to work on a larger scale, although he will be well advised not to move too quickly in that direction. When that time comes, and it will not be delayed long, he will wish he had bought a larger press.

More about the Press

The printing press is a very simple piece of machinery.



Jigger.

Oil Rubber.

Ink Roller.

Heater.

Ink Dabber.

Muller, Slab, and Dabber.

·MATERIALS·USED·IN·PRINTING·

It consists of a heavy metal roller, under which is a travelling plate which moves as the roller revolves. The roller can be brought into closer contact with the travelling plate, or may be raised, by means of a screw on each side, thus giving greater or less pressure on the plate. A hand wheel provides the motive force. At least two thicknesses of thick felt cloth, or "printers' blanket," are required to place between the roller and the plate when it is lying on the travelling plate.

Blankets

A few other articles are necessary to complete the outfit for printing.

Heater

Some means must be provided for heating the plate and keeping it at a temperature which can be raised or lowered at will. This is easily done by means of an ordinary small gas ring, connected to a gas pipe, fitted with a tap. Over the gas ring should be placed a thick iron plate firmly mounted on iron legs; the plate should be one-eighth to one-quarter of an inch thick, and should be about fourteen inches by ten, unless it is desired to print large plates. The legs should be raised about eight inches above the table on which it is fixed. This is called the "heater." Close beside the heater, and at the same height should be a wooden box, the "jigger." The top of the box should be of hard wood which will give a smooth, polished surface, and of sufficient thickness to be rigid. The heater and jigger should be placed on a strong, rigid table. If they are fixed, so much the better.

"Jigger"

Slab

A slab is required on which to grind the ink. Usually a slab of lithographic stone is used, although a sheet of plate glass will do. It is not necessary to get a large stone, sixteen inches by twelve or fourteen will suffice.

A large stone is heavy, but too small a slab is a constant source of irritation, as in crushing the lumps of colour the pieces are liable to fly off a small slab too frequently.

"Muller" The "muller" is used to grind the ink. It is a conical or cylindrical piece of stone with a smooth lower surface.

"Dabber" The "dabber" is required for working the ink on to the plate. It is made by spreading a piece of stout but smooth material on a table, laying on it a pad of cotton-wool, then a pad of horsehair, and lastly a disc of stout cardboard. The outer layer of material is then gathered up and tied tightly to form a handle. Leather may be used, but it must be soft and pliable, *e.g.* a piece of fine kid, or it will harden and crack, causing scratches on the plate.

Muslin Rags A supply of very stiff muslin ("stiff book-muslin" is suitable) is required for wiping the ink from the plate. Most etchers prefer muslin of a stiff, coarse texture, claiming that a softer material not only removes the ink from the surface of the plate but is pressed into the lines and takes ink from them as well; but I have met etchers who prefer the softer texture.

The use of a piece of soft butter-muslin, which must be provided, will be explained later. A plentiful supply of old, soft rags is a great convenience for cleaning the plates, the more washed and boiled the better: they must be soft or they will add much to the etcher's labour by giving him scratches to burnish from the plate.

Ink Ink may be bought ready mixed and may be used thus, sometimes, to pull a trial proof if one is required in a hurry; but it is much better to make it as it is required.

The ready made ink is often of too smooth a texture, and the etcher wishes to vary the colour of his ink for various plates. The ink may be bought from the colour merchant in lump or powder. Frankfort Black is the most generally useful.

Frankfort Black

For many plates the Black alone will not be suitable, and it is usual to add a little colour, Raw Umber, or Raw Sienna, to warm the Black. The colour should be used sparingly, especially the Sienna, but there is nothing like experiment to determine the proportions; as a rough guide, nine-tenths black to one-tenth Umber will give a pleasant colour for most purposes.

Umber or Raw Sienna

Burned Linseed Oil is also required with which to mix the ink. The thin oil is best. Two pieces of sheet iron should be provided between which to place the layers of blotting-paper, holding the damped paper, in preparation for printing.

Burned Linseed Oil

I will defer the question of paper till later, but of course a supply of paper of various kinds will be required.

It would be well now to describe the whole process of printing a plate in detail.

Several hours before printing the paper should be prepared. As many sheets as are required should be thoroughly damped; "soaked" is perhaps a better term to use. They should then be placed between sheets of blotting-paper, which should be placed between the sheets of iron. The sheets of iron exercise an even pressure, and help to drive the superfluous water from the paper into the blotting-paper. When ready for printing, the paper should be thoroughly and evenly damp, without having water lying on any part of the surface.

Soaking the Paper

Adjusting the Press

The pressure of the roller of the press should now be adjusted by passing the plate through the press with a piece of soft paper lying on it. By examining the plate mark it will be possible to see if the pressure of the roller is uniform. If not it may be adjusted by means of the screws.

Mixing the Ink

The ink should be prepared next. The lump or powdered colour should be placed, in due proportion with the Black, on the slab, and crushed with the muller. The Black should then be thoroughly mixed with the Umber by means of a palette knife, a very small quantity of the burned oil added, and the muller used with a grinding motion, until the oil and powder are thoroughly mixed in a thick and gritty mass. A little more oil may then be added and the grinding continued until the gritty particles are gone. It is not advisable to grind too smoothly, and it is well to be sparing of oil, or the ink will be too thin. There is a temptation to make the grinding operation easier and quicker by adding too much oil; but the result is likely to spoil the whole operation, as thin, weak prints will be obtained by the use of thin ink.

Again it is only by experiment that the etcher will arrive at the best consistency.

While the grinding has been in progress the gas ring should be burning under the heater; a low flame only is necessary. The heater should be hot, but not hot enough to make the plate burn the hands.

Inking the Plate

Everything should now be ready to hand. The plate is placed on the heater till it is thoroughly warm, and a dab of ink placed on the dabber with the palette-knife. Work the ink on to the plate with the dabber. Ink every part without dragging it, using the dabber with a rocking motion. This will work the ink thoroughly into the lines without scratching the surface of the plate. Some etchers use an ink-roller (see illustration) to ink the plate. It spreads the ink evenly over the surface, but I think is less effective than the dabber in working the ink into the lines. Remove the warm, inked plate to the jigger. Take a piece of the stiff muslin rolled into a pad and take off the surface ink, using the pad with a circular motion, and exerting even pressure on all parts. Avoid dragging the pad over the surface heavily; if such an action is necessary, it points to the plate being too cold, or the ink too stiff. If the plate is cooling too rapidly it may be heated again; but if it is wiped while too hot the ink comes out of the lines too readily and a thin weak plate is the result. A clean pad of stiff muslin should now be used, lightly, with a circular motion, and exerting an even pressure, until the surface of the plate is clean, to the eye, except where the ink is left in the lines. Actually a thin film of ink is left all over the surface. In almost all cases it is desirable to leave this film of ink, although it may be removed from part of the plate with advantage in some cases. We will return to this question later and take it for granted that the beginner will be content to leave the thin even film which is left after polishing with the second pad of stiff muslin. It is better to finish with a pad which is not quite clean, or too much ink will be removed. If the proof is required to test the condition of the work on the plate, it may now be passed through the press; but the resulting print will be harsh and wiry, although it will have the advantage of showing the lines very clearly,

Wiping the Plate

"A Trial Proof"

and the extent to which they have been bitten. To obtain a proof possessing the rich quality that one desires in an etching, one must resort to "*retroussage*." This is the name given to the final treatment of the plate before printing. Warm the plate again and the ink in the lines will be seen to swell and come to the surface. Take a loosely made pad of the thin butter-muslin and pass it very lightly in all directions over the plate, not dragging it, but lightly touching each part of the plate. The effect of this is to soften the ridges of ink brought to the surface by the heat. The value of this is sufficiently apparent when the print is compared with one taken without making use of *retroussage*. Experience will teach the beginner the amount of *retroussage* which is desirable. Too much will give a smeared appearance to the lines and make the print muddy.

"Retroussage"

Hand Wiping

Before using this method some etchers prefer to finish the wiping of the plate by means of hand-wiping, but this requires considerable experience. The fleshy pad at the outside of the palm is used fairly vigorously to polish the surface of the plate. This method has the effect of taking most of the film of ink off the plate, and should be used with discretion, if at all. A lightly bitten plate may be improved by this method, and, where a plate has a delicately bitten sky, it may be used with good effect as it gives full value to the lines; but it has a tendency to produce a cold, staring effect.

Whiting

Sometimes whiting is used as an aid to cleaning the plate. It is seldom used for the whole surface, as it entirely removes the film of ink and the result is far from pleasing. Possibly it may be desirable to remove the ink entirely from a part of the surface of the plate, and to do this the pad of the hand is lightly rubbed over a piece of whiting, then in a little ink, and used to clean the portion of the plate where the effect is desired. Care should be taken that no grit is taken on to the hand with the whiting. The beginner, however, will be well advised to leave this method alone. To justify itself it must be done very skilfully. There are great differences of opinion as to the justification for the manipulation of the film of ink on the plate. The purist declares that no differences of tone are allowable, unless produced by the needle and the bath, and that the film left should give the slight even tone when the plate is cleaned in a straight-forward manner. When one sees plates in which it is sought to mask bad drawing and faulty etching by leaving tones of varying density on the plate, one sympathises with this somewhat austere point of view.

There is a temptation, also, to obtain melodramatic effect by leaving ink on portions of the plate. Many etchers would say that these are instances of the abuse of a legitimate practice, and that if it is possible in the wiping of the plate to produce a subtlety of effect which was not gained in the bath, it is perfectly legitimate to do so. Does it not depend upon the etcher's point of view with regard to the printing of etchings? If he looks upon it as an integral part of the artistic process, then the artist must claim the freedom to express himself in that, as in other phases of the work on the plate. If, on the other hand, he considers the process of etching as ending with the finished copper plate, the printing may well be left to another person, and no subtleties of printing expected or allowed. However it should be kept in mind that in very few plates will any differentiation of tone be an advantage, and the beginner may well leave the whole question alone, and feel quite satisfied when he obtains a clear, even, luminous tone: he will have achieved a success worth much patient effort.

Whatever method of wiping has been adopted we will assume that the plate is ready for the press.

Printing

Place a sheet of thick plate paper on the travelling board of the press. Place the warm plate on the paper, face upwards, and lengthwise across the board. On the plate lay the damped paper, on which the print is to be made. Cover with another piece of damped plate paper, and also with the layers of printers' blanket, and pass it through the press. Remove the blankets and plate paper; carefully lift the paper from the plate, and —be prepared to face disappointment. After a time one gets hardened to that sense of disappointment. Perhaps when, if ever, one becomes a master of etching, it is replaced by elation; but for most of us there is always that shock of disappointment at the sight of the first proof from the plate. I think it was Mr. Macbeth who said: "We are always beginning our masterpieces, and finishing our pot-boilers." Of course each plate we start is to have some of the qualities of greatness, if we take our work seriously; but that first sight of the proof quickly brings us from the clouds. But, after all, we take courage from the memory of former plates which, if not masterpieces, have had something in them of merit, and which were just as uninspired and uninspiring at first sight. At least we can see our blunders plainly set before us, and are better equipped for further work on the plate. When we see what great alterations Rembrandt made on many of his plates before they satisfied him, we may believe that even he felt that sense of disappointment sometimes, greater perhaps than ours because his vision was greater.

Stretching and Drying a Proof

If the damp print as it comes from the press is placed on a flat board, with a sheet of blotting-paper interposed, and the edges fastened to the board by means of tacks about an inch apart, it will dry flat without damage. If flattened under pressure, the ink must be allowed to dry first. The paper should be damped again before placing it under pressure, and the pressure will have to be considerable to stretch the paper flat.

Cleaning the Plate

If more prints are to be taken at once, it is only necessary to warm the plate and repeat the process, but if not, it is necessary to wash the ink from the plate with a little paraffin at once. The plate should never be put away with the ink in the lines. It hardens and is troublesome to remove.

SOME REMARKS ABOUT PAPER

Paper

The would-be printer of etchings will experience considerable difficulty in obtaining satisfactory paper for printing at the present time. Even before the war it was one of the chief problems the etcher had to face, and much time was spent in hunting for a satisfactory paper and in experimenting with different kinds. Many kinds of paper made before the war are now unobtainable. It is of little use to recommend papers by name. It is only possible to point out the qualities which are desirable, and recommend the etcher to experiment with various kinds of paper until he finds one which suits his purpose.

Old Paper

Without doubt, the etcher will soon fall a victim to the desire for old paper, and will haunt second-hand book-shops for fly-leaves of old books. This desire is not merely the result of a craving for that which is rare and difficult to obtain. Undoubtedly no new paper will give a print of the beauty and richness obtained by using old paper of good quality.* But while the enthusiastic seeker may in the course of years acquire a few dozen sheets of good old paper, suitable for printing, that will hardly satisfy his zeal as a printer. He is now too late in the field. The stores of old paper have been rifled long ago, and it is rarely that one can obtain even a few fly-leaves in good condition. These precious sheets must be kept for a few special prints; but for ordinary purposes it is necessary to use new paper. It is necessary then to look for new paper which possesses some of the qualities, at least, of the old paper. What are the qualities which make it so valuable? Its chief beauty is its tone and colour, and that it owes to the hand of time. Nowadays men imitate the work of time in most materials with great skill and success, but the success has not been conspicuous in the case of paper. It is said that real India paper approaches the colour of old paper most nearly of any modern papers.

Desirable Qualities in Paper

Another desirable quality of old paper is that it is soft, without being flimsy: the size has gone from it in

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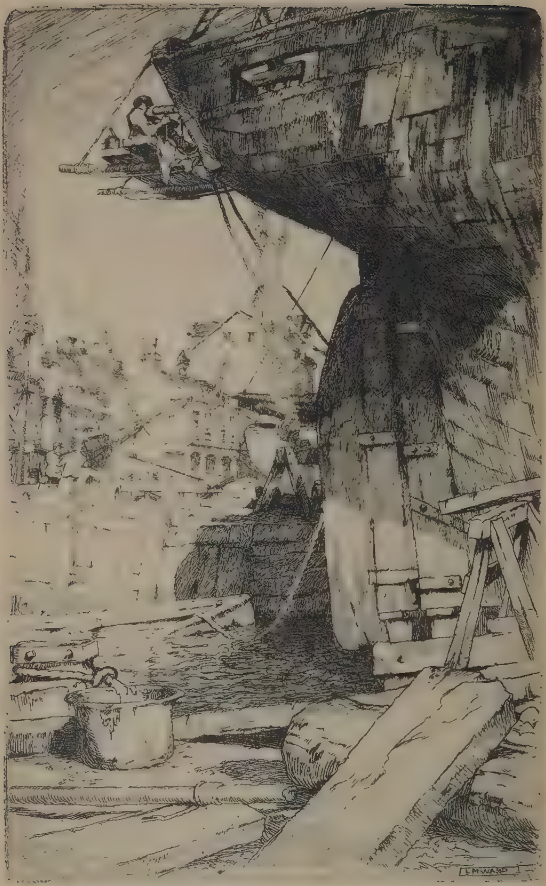
*Many sheets of old paper, on damping, reveal damp spots which before were hardly noticeable. It will often be found, if these sheets are well soaked and then dried before a fire, that the damp spots vanish or at least become less obvious. This method, though, is not infallible: doubtless much depends upon the antiquity and nature of the paper and the age of the damp spots.—Ed.

Another method, if the "foxing" has not gone too far, is to brush the spots with a little spirits of wine; allow them to dry and then touch again with a weak solution of oxalic acid.—Ed

India and Japanese Papers

process of time. The real India and Japanese papers are so thin and fragile when damp, that they are extremely difficult to handle and make printing a somewhat exasperating process, although the resulting prints may have some advantages over other modern papers, particularly so in the case of the real India. For ordinary purposes one should aim at getting a soft paper, free from any gloss, of a pleasant warm tone, and tough enough to stand handling when damp.

Usually, in any paper which is not quite white, the colour is much too decisive, it usually approaches yellow or deep cream. On the other hand, a pure white paper gives a cold proof. It is only possible to recommend the beginner to obtain specimens of papers which seem to meet the most obvious requirements of the printer of etchings, and to experiment until he finds the best.



UNDER THE STERN. By Leslie M. Ward, A.R.E.

ETCHINGS AS DECORATION

BY LESLIE M. WARD, A.R.E.

ETCHINGS AS DECORATION

"But surely an etching has no value as decoration?" was a remark made to the writer by a collector in many ways enlightened, and appreciative of the kindred art of painting.

Well, perhaps in some cases he was right. We can easily recall the etchings appearing during the dark period before Whistler and Seymour Haden revived and gave direction to the art; whilst perhaps even to-day there are many works, which, admirable in drawing and meticulous in detail, still lose sight of the essential decorative quality of art.

Etching as Decoration

Every etching should be a decoration, however. By the placing of the subject on the copper, by selection of line, choice and shape of mass, even the slightest sketch can have that largeness of feeling, that rhythmic music of line, common to the greatest art.

Etching an Art of Line

Etching is essentially an art of line, as we may see in the works of masters. The art reaches its most virile note, its greatest lyrical intensity, when the line of the master surely and delicately records on the polished surface of the copper some orchestration of space music, some subtle rendering of form, seen, felt and set down in simple graphic line.

For the line statement of a Rembrandt, a Meryon, a McBey, or a Zörn, we would gladly sacrifice the laboured tonalities of incompetence and mediocrity.

Selection and Interpretation

Nowhere do we find the need for selection and interpretation so definite as in the case of etching. Anything approaching the literal representation of the whole range of values is undesirable. For instance, in a finished portrait the background may be left bare copper, so adding contrast and dignity to the head; or again, the coat or hand may be just indicated in line. Would not all collectors and artists of enlightenment prefer this simple treatment as shown in the first state of Van Dyck's portraits, rather than the finished renderings furnished later by the engravers, who, satisfying the custom of the day, elaborated and displayed the accessories and draperies of the subjects.

Selection in Landscape Work

Rembrandt, Whistler and others, applied this treatment to landscape and modern subjects, so that instead of the even elaboration of every detail seen in the works of the old engravers, we get concentration upon some portion of the subject which was the artist's real motive in producing the plate, other objects being only indicated here and there by the placing of a line leading up to and enhancing the general composition. Sometimes it is the foreground which forms the subject in this way; at others the distance, particularly in such plates as Whistler's "Black Lion Wharf" and other Thames subjects, which caused Mr. Hamerton to talk of a "Chinese disdain of tonic values," forgetting, as he did, that in black and white art selection is essential. Whistler indeed was an innovator in this matter, though he has been followed by many others, so that we can undoubtedly say that the younger men to-day do understand the decorative value, and have improved the taste and direction of the art, whilst sometimes lacking the amazing dexterity and technical ability of the earlier etchers.

There is undoubtedly something tedious and inartistic in a work which is evenly worked in the same cold, calculating way all over to its edges with line work and shading of equal importance.

Intelligent Elimination

The etcher must know how to eliminate as well as to portray. He must be able to set down a passage from nature with telling accuracy when required, but—even more than his brother painter—be able to leave out material that detracts from the general *ensemble*.

Linework

Etching is the art of line expression upon a metal plate which is capable of yielding a number of impressions. The etcher, therefore, thinks in terms of line. In selecting his subject he will ask himself, "What are the characteristic lines in this? How can I best emphasize and set them down; and, secondly, how shall I arrange the tones, the direction of the line shading, to best enhance the truth and effectiveness of the scene?"

Contrast

It is the writer's conclusion, from the examination of many works by masters of the art, that in line etching proper it is well for the artist to contrast masses of closely worked line with passages of almost bare copper. In this way a freshness and simplicity is obtained as in the Venetian plates of Whistler, many of Rembrandt's landscapes, and a large number of plates by modern men.

Nocturnes

There will, of course, be exceptions to the rule, as in the case of nocturnes and other exercises where more complete tone is aimed at, especially in large scale work and in the combination of line and aquatint, sand grain, or one of the tone processes.

Goya and Mixed Methods

Francisco Goya, the Spanish painter-etcher, was the first to use this last method with effectiveness. His plates were drawn in vigorous line, and subsequently tones were bitten in by means of aquatint, according to a pre-arranged scheme of lighting, very broad and simple in its disposition.

There is a certain deadness of effect about the aquatint process which is noticeable in the old prints of a hundred years or so ago. Whilst we admire their technical mastery, their artistic quality is often lacking, owing to the fineness of the grounds employed and the hardness of the tone edges.

Decorative Quality of Aquatint

In Goya's work, however, there is always great virility and a fine decorative sense, due largely to the use he made of strong line work, and to the coarse textures of the grounds employed.

Some modern artists—whose technical ability will not compare with that of the eighteenth century aquatintists—have yet produced far more pleasing results, often on the lines of the Spanish master.

Vigorous bitten lines show in relief in the proof above the aquatint tone, which is relatively much shallower, and this makes a strong decorative print, in some ways similar to those popular pen and wash drawings so much the vogue amongst our well-known illustrators.

For decorative etchings this cannot be too highly recommended, and for any other full toned subjects, where the effect depends rather upon definite masses of tone juxtaposed, than upon the use of linework only.

Turner's "Liber Studiorum"

In J. M. W. Turner's "Liber Studiorum," and in the additional subjects produced more recently by Sir Frank Short, we find a similar treatment allied to mezzotint.

No student of etching can afford to neglect the work of Turner with its wonderful variety of pure line work shown in the first state proofs before the mezzotint was added, though in the finished prints the etched lines are so strongly bitten as plainly to show through and relieve the tones.

Rhythm

Much has been heard in modern art of the quality of rhythm, which may be defined as an interweaving of lines, tones and colours dissimilar in themselves (but slightly echoing in quality) into a design giving movement and congruity of effect, producing a new beauty of design from the material of the subject, but not definitely depending on representation.

Haden's Sense of Rhythm

Etching is an admirable medium in which to express the feeling of rhythm. In most of Seymour Haden's work we feel this, as in the small plate of "Kilgaren Castle" in which the lines of the hills and river bank are musical in their alliteration, whilst they are balanced and contrasted by the lines of the solid rock-like fortress and the reflections in the river.

D. Y. Cameron

D. Y. Cameron, in his landscapes, is also a noteworthy exponent of the art, as in his "Banks of the Meuse" and other plates where the whole effect is the expression of this line music, causing the plate to sing a little song that he who appreciates may hear.

There is a type of drawing which lately has received particular attention, but which is also the oldest form of graphic art. That is the representation of objects, figures, landscapes, etc., by means of contour rather than by light and shade.

Beardsley and the Japanese

The work of Aubrey Beardsley, and of the Japanese, each in its own way portrays this fascinating style.

Their convention

The design of the artist is expressed in severe line, possibly enhanced by masses of flat tone, or else tones are obtained by the multiplication of detail, such as a decorative convention of a certain tree in which the tone is made by drawing in the leaves and branches, as was frequently the resort of the illuminators and block cutters of Mediæval times.

Etching offers a ready means of expression for this type of art, and we may surely look for developments in this direction.

It is largely an art of abstraction and decoration, which should appeal to our younger men who aim at decorative and expressive qualities rather than at literal, photographic representation.

Utilitarian and Decorative Uses of Etching

For such purposes as illustration, certificates of merit, rolls of honour, book plates, calendars and Christmas cards, etching, with its capacity of multiplication and simple hand printing, should prove a ready method for the student and designer. Let him not be narrow in his view of art, but rather by means of good drawing, thoughtful expressive design, and good craftsmanship, produce works typical of his own time, but carrying on the tradition of the past.

Mr. C. J. Holmes has repeatedly noticed an analogy between the graphic arts and that of poetry, and this is specially appropriate to the etchers' art.

Etching and Poetry

Usually small in size, and sometimes quickly done, an etching is often the considered expression of a momentary vision or feeling. The artist is impressed by some aspect of natural beauty which seems to him appropriate to his craft. The sweep of a road over moorland country—the distant silhouette of a village seen on rising ground against the sky; or the mass of buildings, masts, ships and chimneys, of a seaport town. Whatever be the subject, let it be expressed vividly, intensely, in tones of rhythmic line, by ordered and proportionate masses; the character and shape determined by its material. The convention of line permits emphasis and directness of statement comparable only to good verse, whilst the delicacy obtainable by the great freedom and ready control of the etching needle affords comparison with the subtle shades of meaning which the poet may feel.

If the etching has been considered from the first by placing, rhythm and massing, it may be truly said to have a real value as decoration.

Essentially Decorative Etchers

Brangwyn, Piranesi, Hollar, Hartley, Hankey

Whistler, Cameron, Bone

Some etchings are undoubtedly more decorative than others. There can be no print by Brangwyn which does not form an admirable wall note, just as amongst the older men a Piranesi, or a Hollar, possesses similar qualities; whilst aquatints by such modern men as Hartley or Lee Hankey, are from the first intended rather for the wall than for the portfolio. But though these etchings hold their own in a big gallery, or in the library of a great house, or church parlour, the small etching conceived in a lighter vein has a dainty pattern and sweet quality which makes it admirable for a smaller house. Who, for instance, would not delight in a living-room or study hung with the proofs of Whistler, Cameron or Bone? On a plain ground of warm tone a simple line of etchings with broad white Whatman mounts and narrow black, brown or natural wood frames, gives a note of distinction unobtainable by the use of scrappy colour-work, hung without some dominant idea, and the neutral tones will hamonise with any colouring in furniture or fabric.

In a tea-house of the writer's acquaintance, the warm amber colour of the walls, the brown waxed oak of the fittings, and the orange shades of the electric lights, absolutely cry out for the crowning note of some good etchings.

Etchings in the Music Room

What, too, could be more suited to the severity of the music-room, with its dark significant piano, than the addition of some one or more etchings, severe in design and expressive of the moods of nature?

Coloured Inks

The colour of the ink used in printing has much to do with the decorative effect of a print. A warm Black composed of French and Frankfort Blacks, with Burnt Umber to warm, has a fine rich effect; whilst pure Umber, printed on a cream paper—so that the lights may not be cold—has a warm and invigorating appearance. This colour is admirable for portrait heads and dry-points of figure subjects, or delicate landscapes. Sometimes a faint suggestion of Blue can be introduced into the Black by, say, a little Chinese Blue and a touch of Burnt Umber to give a greenish tone. For seascapes, moonlights, etc., the effect can be very fine; but the Blue must on no account be strong, or it will appear cold and harsh.

Sometimes prints may be in pure sienna, which gives a fiery sanguine effect, but this cannot be recommended except for occasional plates.

Generally speaking a warm Black is the best colour to use. The greatest artists have been content with Black or Brown, believing that other colours lose their quality and beauty by being printed under the pressure of the copper plate; but it is interesting to experiment with other colours, especially if a "note" is required for a particular room.

Something may be said, too, for the Japanese idea in which frames of similar size are used, and prints are changed, say, every month or so. A collector friend of the writer practises this method and gains great pleasure from the added interest derived by living with stimulating prints periodically changed in this way.

Etchings on the Wall

Etchings of strong tone tell well upon the dark panelling of an old room. There is something so fascinating and beautiful about the copper plate printing process in the hands of an artist, that is not rivalled by lithography or any other monochrome process at the present time. The beautiful tone of ink left after the plate has been wiped ready for printing, clothes the lines in a mysterious beauty and softness, which is never allowed to become a fog, or sooty smear, in the best work.

Paper

Old hand-made papers, Dutch, Japanese and Indian, each contribute their individual beauty, and this is enhanced by the rough whiteness of the mount, which afforded so much delight to Whistler, and still is the standard for exhibitions to-day. Generally speaking, a narrow dark frame is the best. If a gilt frame is very narrow, simple and subdued in colour, it can do little harm to the general effect, but do not let us frame our etchings to the plate-mark in massive gilt, as the writer had the misfortune to see a fine modern aquatint treated by a collector, with a greater bank balance than good taste.

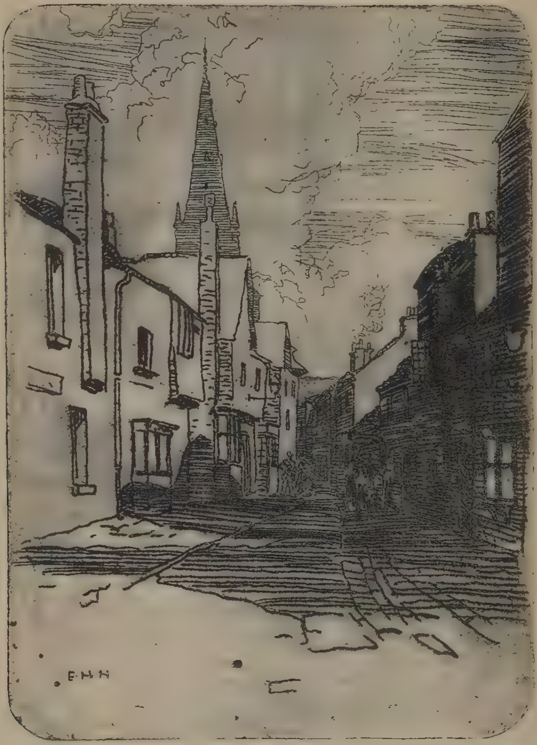
Frames

Etching and "Democratic Art"

This is an age of democracy. The capitalist—even he of moderate means, it appears—is to be eliminated. It is all to the good, therefore, that etchings, colour prints, lithographs and wood engravings, should be widely appreciated and circulated amongst the larger public, who is beginning to take a vital interest in art.

Etchings as Investments

If bought from the artist, by a discerning collector, whilst he is still young, an etching is bound to increase in value and prove a sound investment. But is it not rather to the pleasure which it will constantly give him, that the purchaser looks for his reward? Let him, then, study the finest examples of the art, which by museums and illustrations it is now possible to do; and by so doing improve his judgment, and derive increasing delight from the honest and thoughtful and, at times, inspired craftsmanship of the art-worker. If by the study of such a book as the present he will in any way be helped, the little band of artist-etchers responsible for it will be amply repaid.



OUR VILLAGE. By E. Hesketh Hubbard, A.R.W A.

ON COLLECTING AND STORING ETCHINGS

BY E. HESKETH HUBBARD, A.R.W.A.

ON COLLECTING AND STORING ETCHINGS

Collecting Instinct

The collecting instinct is common to all. In the nursery it may be shells or flowers: in school, stamps or butterflies: later, old furniture, money, knowledge, facts. At first there is a fascination in merely amassing a quantity of one species: but as we progress as collectors we begin to substitute quality for quantity. Collecting becomes an art, dependent on selection for success. None will deny that a few prints well chosen, adequately labelled, and arranged intelligently are of more interest and in every way more desirable than many ill-arranged.

Collecting as an Art

Advantages of Collecting Etchings

As it is true few can afford to collect pictures so it is true few cannot afford to collect etchings. A small but good collection of prints can be marshalled together for the price of a single worthy example of good painting. In these days, when the small house becomes more and more desirable than its larger neighbours, etchings, which occupy but a small wall-space, become more and more acceptable. Over china and porcelain they have the advantage of being unbreakable, over brass and pewter the advantage of requiring no cleaning. They are not easily mislaid or lost like stamps; they are inexpensive and if chosen with discrimination sound investments.

Motive for Collecting

This last-named is rarely the motive that prompts the true collector—he is urged to collect etchings because of his love for things beautiful, because he wishes to decorate and dignify his home, because of the pleasure afforded him and his friends by looking through and handling a collection of etchings.

Making a Beginning

Perhaps it would be wise for the uninitiated collector at first to collect any prints he may come across so as to be able to distinguish quickly and with certitude, unaided by the magnifying glass, the difference between a steel and copper engraving, an aquatint and lithograph, a woodcut and etching. Arrived at that stage the average collector—he who has neither unlimited time nor money—must start to specialise.

What class of Prints to Collect?

"Reproductive Etchers"

"Painter Etchers"

Etchings for the Folio

What kind of prints is he going to collect? Engravings, lithographs, woodcuts, mezzotints, aquatints or etchings? Assuming he chose the last, is he to collect ancient or modern etchings or to try to bring together a representative collection of etchings from the earliest known to the print still wet in the artist's studio, illustrating the development of the art throughout the centuries? Many an interesting collection has been built up with subject matter as its guiding principal—collections of portraits, landscapes, churches, castles. Other collectors have confined their attentions to the work of etchers of one nationality or particular "school," others have limited themselves to impressions from plates etched during a certain century or decade. Before starting seriously to collect he has to choose between the work of reproductive etchers (those who simply reproduce or interpret on copper or zinc the paintings or drawings of other men), and the work of "painter-etchers" (men who execute original subjects direct on the plate). The limits of a collection may even be controlled by the size of the plate, large or small, or whether the prints are to be stored in folios or solander-boxes or whether they are to be framed and hung on the wall. Clean-wiped prints, remarkable for their delicacy of line, are most desirable for the folio where they will be handled and looked at

Etchings for the Wall

closely: strong, boldly-bitten work, full-inked, *retroussaged* prints are most pleasing and decorative for the wall.

Where to procure Etchings

From whence is the collector to obtain his prints? There are five main channels of supply. First, there are the print-sellers where prints are obtained with little trouble. Then there are fellow-collectors with whom one may get into touch through newspaper advertisements, clubs and introductions. If one is collecting the work of contemporaries there are numerous periodical exhibitions in the large towns where one can purchase. Perhaps the most delightful way of securing modern etchings is to visit the studios of etchers themselves and where possible procure prints from the artist himself (thus incidentally saving commission). I say "where possible" because some etchers have pledged themselves to dealers and can only sell through them. Finally, there is the auction-room where one may see and learn; but where the neophyte should rarely purchase.

Prices

Another difficulty to most callow collectors is the question of price. It should always be remembered, though, that the first consideration in buying prints or anything is not price. The first consideration is to obtain exactly what one wants. For that reason I would warn the collector of bargains—of buying a print not because he wants it but because it seems to him cheap. It is not cheap—it is most expensive—to buy what one does not want.

A wise Maxim about Prices

There are no real price criteria. Recent auction-prices usually indicate value—but only approximately. The collector of moderate or limited means might well, at the outset of his career as collector, set himself a price limit for each print—say 30/- at first. In the early days he will be bound to make an occasional mistake; but if he allow such a maxim to guide him his mistakes will not ruin him. He should buy always the best he can afford; but the best is not always the most expensive. Prices often are artificial, set by the prevailing fashion. The beginner, unless he be a man of wealth, should never attempt to collect prints by a favourite nor covet prints of great rarity. He will find it useful and interesting from the very commencement to keep a book wherein to record the date and place of purchase, artist, title, size, state and price of every etching procured. This will be invaluable when he wishes to dispose of some of his prints to make room for better impressions or more desirable examples, besides being of the utmost interest and value to succeeding generations, if preserved.

Advisability of System

"States"

There are other things besides fashion that dictate price. There are what are known as "states." During the process of etching a plate the etcher pulls an occasional proof to *prove* the plate—to see how it is progressing. These early *proofs* are known as "states." Early "states," the first, second and third, assume an enhanced value compared with later "states" simply because of their rarity, for the etcher naturally prints only one or two of each early "state" to guide and assist him in his work. They are not more beautiful than later "states," generally they are very incomplete. If specialising on the work of a single artist great interest is added to a collection if impressions of all "states" of one plate can be secured: but in a general collection a good impression of a late "state" suffices. The last "state" of a plate is not necessarily the best, for many an etching has been ruined by overwork.

Impressions

Besides "states" there are good and bad impressions which can only be fully appreciated by comparison. There is often a great difference, and justly so, in the monetary value of a fine and poor impression. In old etchings the size of margins affects value; but the width of a margin makes no difference to the appearance of a print when mounted. As etchings are things to look at and enjoy, not to measure with rule and dividers, this supposed margin value is unreasonable and greatly over-rated. Besides, some of the greatest etchings in the world—prints from plates by Rembrandt and Whistler—are marginless. This is only another instance of how monetary value in these matters has nothing to do with merit. Mould marks, stains, dirt on the printed surface, rightly depreciate considerably the value of an etching and prints that have been "laid down"—*i.e.* pasted to a card—if for no other reason than that the paste may deteriorate and ruin the print, are cheapened and should be avoided.

Margins

Things that depreciate Value

Cleaning and Restoring

The cleaning and restoring of old or damaged etchings is an intricate task, a subject outside the province of this chapter. I must refer collectors wishing detailed information on these points to the bibliography at the end of this book.

Mounts

But the question of mounting, which worries many collectors, does come within the scope of the present chapter and I will try and deal with it fully. The primary object of mounting prints is to facilitate their handling and to prevent the printed surface being touched during examination. Happily the old practice of pasting prints into albums is a thing of other days, having passed with the advent of the loose-leafed book and card index. It is practicable to use mounts of a uniform size which the collector early in his career should determine and abide by. A very serviceable size is an outside measurement of 18 ins. by 14 ins.: but if he covet some of the larger prints, 24 ins. by 18 ins. is a better size. Various kinds of card or even thick papers are used. "Sunk mounts" are employed in the best collections. The print is attached to a sheet of card or thick paper by two small hinges of paper pasted to the upper edge of the print. This enables one to inspect the reverse of the print which sometimes is necessary, as for instance, when one wishes to examine a watermark. Over the card to which the etching is attached another card of the same dimensions is placed, an opening having been cut previously of a size sufficient to show the plate mark and artist's signature. The card to which the print is attached and the card with a cut opening usually are hinged along their top edges only. Mounts of a light cream colour are preferable for most etchings, and I think we may take it as a good general rule that the lighter the ink used for printing the etching the lighter can be the mount. Great interest is added to a collection of etchings if affixed at the base of the mount is a neat label bearing a carefully printed or typed note about its author, the subject and so on.

Tone of Mounts

Labels

Mount Margins

The placing of the print on the mount is most important and gives the collector opportunities to exercise his taste of judgment. The ratio of the margins around the print must be carefully considered. The experience of enlightened collectors is that the centre of the printed surface of the etching should never be below the "optical centre" (which is slightly higher than the "mathematical centre") of the mount. The most satisfactory margin arrangement is to have the widest margin at the base, the top next in size, the side margins, which should always be equal, least. The larger the etching the smaller the mount is the rule.

The Folio and Solander-box

When mounted, etchings are either framed and hung on the wall or stored in a folio or what is known as a solander-box—a box shaped like a large dummy book one of the sides and one of the ends of which is hinged—similar to a not uncommon type of commercial letter file. Solander-boxes, though more expensive, are preferable to folios.

Further use of Mounts

It is rarely possible to frame and find wall space for every etching in a large collection; but, whether the collection be small or large, its owner will want to frame and display a few of his choice possessions. Here the mount serves an additional useful purpose. Glass often "sweats" on its inner side; but the print being sunk in its mount the damp surface of the glass and the printed surface of the etching do not come in contact. If they touched damp marks might be transferred to the print.

Frames

Narrow frames of black, white, cream or natural wood are best. They should be of standard sizes as should be the mounts. The backs of the frames should be of three-ply wood, held in place by small screen clips so that the back can easily and quickly be removed and the prints changed when desired.

Where to Hang Etchings

Etchings, unless very large and bold, are lost in a huge room. They are better hung in small rooms, passages or on the staircase walls where the spectator is compelled to see them at short range. The walls best

Most Suitable Backgrounds suited to etchings are those covered with gold Japanese wall paper, putty or stone coloured wash, stippled paint or any covering of an unobstrusive, neutral colour. The *Light* best light in which to examine prints is a top light: failing that, one from behind the spectator. Unframed etchings are usually shown on a small table-easel.

Advice about Collecting A final word of advice. Have patience. Have courage to seize opportunities. Constantly go through the collection and discard imperfect for more perfect impressions. Aim ever at quality. Read about prints, and above all *handle* as many as possible. There is no finer tutor than this practice.

Advantages of Collecting Modern Etchings I should like to end with a plea for the collection of *modern* etchings. The collection of old etchings has two grave disadvantages—the best examples are rare and expensive and already in important collections: many forgeries are on the market. Etchings by contemporary etchers, with very few exceptions, are remarkably cheap and never forged. When the collector knows enough to rely on his own judgment as to what is good, regardless of price or fashion, he is in a position to bring together a collection of modern etchings for a very reasonable sum—a sum which in the auction room he might have to pay for a single print by an old master who happened to be the vogue. He will have the satisfaction of knowing that his collection every year increases rapidly in value. The collector who had sufficient knowledge and taste, and enough courage to rely on his own judgment, and bought early etchings by McBey for a few shillings apiece a few years ago has little cause for regret to-day when they will fetch as many guineas. More than this the collector of contemporary etchings becomes a real patron of the arts, encouraging a living man to produce better and better work and enabling the etcher himself to reap in his life-time some reward for his labour.

BOOKS ABOUT ETCHING AND COLLECTING

BY E. HESKETH HUBBARD, A.R.W.A.

BOOKS ABOUT ETCHING AND COLLECTING

The lists of books that forms the latter part of this chapter is not a complete list of books on etching and collecting. The one hundred and fifteen items mentioned have been selected from a list of much larger proportions which means there are many omissions. The present list includes only books written in, or translated into, English. In the hands of the reader who would be familiar with the French and German and other foreign technical books that cover these fields, I would place Mr. Hind's very important book (No. 92 in our bibliography).

Omissions

You will find here no biographies or monographs of individual etchers: I have not thought it necessary to include particulars of sale catalogues, the catalogues of private and public collections or periodic exhibitions; neither have I encumbered the list with particulars of the catalogues of dealers. The serious collector will collect and cherish these—especially the lists that contain prices. I have excluded books that deal solely with engravers' and printers' marks as being outside the province of this book. Present space will not permit inclusion of magazine articles of interest to etchers and collectors of etchings; but I have added a list of magazines that will repay study. I feel some attempt should be made to co-relate the stores of valuable and trustworthy information that lie—to all intents and purposes dead or forgotten—between the torn covers of old magazines. The only systematic attempt I know of in English is the "Subject Index to Periodicals" (Fine Arts and Archæology) published occasionally by "The

Catalogues

Magazine Articles

Athenaeum," at the request of the Council of the Library Association.

Because it is not an 'acid process' I have listed no books on mezzotint, except those that contain information on other processes. Davenport's book (83) finds a place here because of the admirable suggestions on print cleaning and the bibliography it contains.

Prices of Books

A major part of this bibliography has been compiled from old second-hand book-sellers' catalogues collected during the past few years. Prices are so misleading (so utterly unrelated to real worth) and latterly so inconstant, that I have hesitated about mentioning the market value of the books in our bibliography. But if they are accepted as only approximate readers will not be misled. I have decided to state in the final column the prices I have paid for my own copies or at which I have had the books offered me. They are probably all likely to increase in value—especially those containing prints from the original copper plates. Where more than one price has been given the differences (often considerable) are accounted for by condition, binding or association. In some cases the books have been extra-illustrated and so rendered unique: the price then soars into the region of 'fancy.' Some of the rarer books are not priced as they hardly ever come into the market or auction room.

The initials B.M. against some of the rarer books mean that there is a copy of that work in the British Museum Library which may be consulted provided certain formalities are complied with.

Further Omissions

The sizes of books in inches, the number of pages and other minutiæ dear to the true bibliographer, I have not burdened you with, for such details serve little purpose to the general reader and student. Some of the long-worded titles of the older books I have condensed.

Inclusions

Several books on watermarks (papermarks) find a place, for the subject of watermarks is receiving more and more attention from serious collectors and the collection of old papers has long fascinated etchers. One or two reliable dictionaries of engravers are here, though Bryan's (82) yet remains the standard work. I have found room, too, for ten history books. Some of the early books are mentioned because in their day they were important and served a useful purpose. Their interest now is more historical and curious than practical and instructive, for in the light of more recent research and experiment they are inaccurate, their phraseology quaint and terminology unfamiliar and obsolete.

"Studio Specials"

If there is any one set of English publications that in recent years has stimulated interest in and educated the public to appreciate good modern etching, that set is the "Studio Specials." I have mentioned several: their interest is centred chiefly in their many carefully selected and admirably reproduced illustrations.

Notes on Arrangement of the Bibliography

The books in our bibliography are arranged chronologically. The dates refer to the first edition of a work unless otherwise stated. The letters E and C that precede the title tell whether the book is planned to appeal chiefly to the etcher or collector or both.

Contents of the Books

As concisely as possible I have attempted to index the chief contents of the books mentioned. You will notice fifty-one books on the technique of etching are named. Practically every one of these, as a matter of course, contains information about tools and printing and so on, yet only ten books are placed under the heading Tools and only five under Printing. The reason is that these ten books make a special feature of tools, those five of printing.

I do not profess to have handled every book to which I refer, though it has been my privilege to see a good many.

I have tried to provide concise and accurate information about books likely to appeal to makers and collectors of etchings, drypoints, aquatints and colour etchings. If you notice any mistake, inaccuracy or serious omission and will draw my attention to it, such courtesy and help will be greatly appreciated.

1	1583	(E)	**A Profitable Boke.** Few paragraphs on etching. Extremely rare. B.M.	
2*	1634	(E)	**The Mysteries of Nature and Art.** By J. Bate. How to etch. Curious woodcut illustrations. Rare.	
3	1660	(E)	**The Whole Art of Drawing, Painting, Limning and Etching.** By A. Browne. Describes the art of etching.	
4	1662	(E)	**The Art of Graveing and Etching.** By W. Fairthorne. Important.	5/-
5*	1666	(E)	**Academia Italica.** 2 Parts. Part II contains—rules concerning etching, tools required and how used, etching grounds, drawing design on plate.	
6	1672	(E)	**Polygraphice or the Art of Drawing and Engraving.** By W. Salmon. Chapter on Etching. Tools described.	
7*	1675	(E)	**Ars Pictoria.** By A. Browne. Important chapter on etching.	25/-
8*	1680 circa	(E)	**Book of Drawing, Limning, Etc.** (Known as **Albert Durer Revived.**) Fourth Edition contains brief notes on Hollar's etching ground and varnish.	
9*	1688	(E)	**The Excellency of the Pen and Pencil.** Chapter I deals with etching, tools, copper plate, laying the ground, transferring design, biting. Extremely rare.	
10*	1704	(E)	**Lexicon Technicum.** By J. Harris. Contains the section entitled "Etching" from Browne's "Ars Pictoria." Also dictionary of terms.	
11	1706	(C)	**The Art of Painting and the Lives of the Painters.** Translated from the French of Roger de Piles. Important chapter entitled "Of the usefullness and use of prints."	

* Books marked thus are illustrated

12	1730	(C)	**Repertorium Sculptile-Typicum.** First book in English on print-collecting. Chapter on arranging a collection. Alphabetical index of engravers' names, places of abode and dates (See Sculptura-Historico Technica. 1747).	
13	1747	(C)	**Sculptura-Historico Technica.** (Second Edition of above. q.v.) 1766 and 1770 editions contain chapter entitled "An idea of a fine collection of prints" dealing with print classification.	6/6 + 15/-
14	1752	(C)	**The Art of Painting in Miniature, Etc.** Translated from the French. Chapter on "The usefulness and benefit of prints."	
15*	1757	(E)	**The Art of Drawing in Perspective.** Second edition. 15 pages on etching.	
16	1758	(E)	**The Handmaid of the Arts.** By R. T. Dossie. 2 vols. Vol. II., chap. IV. deals with etching—tools, materials, methods. Chap. VI., printing from copperplates.	6/- (2)
17	1768	(C)	**An Essay upon Prints.** By W. Gilpin. Contents: 1. The principles of painting considered as far as they relate to prints. 2. Observations on the different kinds of prints. 3. Characters of the most noted masters. 4. Remarks on particular prints. 5. Caution in collecting prints. Popular in its day but uninteresting to modern collectors except Chap. V.	
18*	1773	(E)	**The Artist's Assistant.** Six pages devoted to etching. Illustration of a "Copperplate Rolling Press." 1807 Edition touches upon Aquatinta.	
19	1780	(E)	**Valuable Secrets in Arts and Trades.** First chapter deals with etching.	
20	1783	(E)	**The School of Wisdom and Arts.** Short chapter on etching.	

* Books marked thus are illustrated

21*	1788	(E)	**Artist's Assistant in Drawing, Etching, Engraving, Mezzotint, Etc.**	6/-
22	1794	(E)	**The Art of Etching and Aquatinting.** By F. Yrubslips (Spilsbury). Useful technical book.	
23*	1795	(EC)	**Observations on Paper Marks.** By Rev. S. Denne. "Archaelogia" vol. XII., pp. 114-131. Five plates of watermarks.	
24*	1801	(E)	**The Complete Aquatinter.** Scarce but useful book. Plate showing ten different specimens of grounds.	
25*	1810	(E)	**Critical and Familiar Notices on the Art of Etching upon Copper.** 25 copies only printed. B.M.	
26	1810	(C)	**A Dictionary of Painters, Engravers, etc.** Seven pages of technical terms.	
27	1810	(E)	**The Academy of Science and Art.** Very short and unimportant reference to etching.	
28	1811	(E)	**Chalcographia.** By J. Hassell. **(c.f. Graphic Delineation, 1826).** Soft ground?	
29	1816	(E)	**The Panorama of Science and Art.** By J. Smith. 2 vols. Etching and aquatinta.	
30*	1816	(EC)	**An Inquiry into the Origin and Early History of Engraving.** By W. Y. Ottley. Reproductions and descriptions of a few watermarks.	32/- + 63/- (L.I.P.)
31*	1823	(E)	**The Book of English Trades.** Two interesting plates showing a "Copper plate printer" and "Engraver" at work. Companion letterpress.	
32	1826	(C)	**A General and Bibliographical Dictionary of the Fine Arts.** By J. Elmes. Glossary of terms and valuable bibliography.	

* Books marked thus are illustrated

33*	1826	(E)	**Graphic Delineation.** By J. Hassell. **(c.f. Chalcographia. 1811).** Practical treatise on etching. Author was an etcher.	
34*	1827	(C)	**An Essay on the Utility of Collecting the Best Works of the Ancient Engravers of the Italian Schools.** By G. Cumberland. Bigotted book but extremely useful for its notes on cleaning, arranging and keeping prints, selection of impressions, etc. 4 plates of engravers' marks and monograms.	12/-
35*	1831	(E)	**Elements of Technology.** By J. Bigelow. Chapter on engraving.	
36*	1835	(E)	**The Book of Trades.** Chiefly interesting because of plates showing engravers at work.	
37	1838	(E)	**The Cabinet of Arts.** By H. Clarke. Pages devoted to etching, preparation of ground, biting, engraving in chalk (soft ground?), aquatint.	
38*	1841	(E)	**The Art of Engraving.** By T. H. Fielding. Sections deal with etching, soft-ground, aquatint. 1844 edition contains plate showing engravers' tools and another showing 8 specimen aquatint grounds. For many years a standard work.	14/- (1) 18/6 (2) 10/6 (3)
39*	1844	(C)	**The Print Collector.** By J. Maberly. One of the best books for the beginner. Chief contents: 1. Collecting in general and of prints in particular. 2. On classification of prints. 3. On the selection of specimens. 4. Of prices of prints. 5. Of the extent or limit of a collection. 6. Of the care and keeping of prints. 7. On the mode of commencing collecting. 8. The new and the old systems. 9. Of books on engraving.	18/6 + 21/-

* Books marked thus are illustrated

			(The Print Collector continued) In 1880 an American edition was published. Rare but very useful. Valuable bibliography, account of contemporary etching and etchers, print collector's marks.	
40*	1849	(E)	**The Art and Practice of Etching.** By H. Alken. Part I. Etching, including drypoint. „ II. Engraving, Soft-ground. „ III. Aqua-tinta engraving. „ IV. Resin ground engraving. Useful plate of tools and how to handle them.	8/6
41*	1849	(E)	**The Art of Etching on Copper.** By A. Ashley. Practical book explaining processes and use of tools. Special references to rebiting and etching on steel. Plate illustrating tools.	
42	1849	(E)	**Etching Described and Simplified.** By C. Castle. List of tools required, etc.	
43*	1856	(EC)	**Paper and Paper Making.** R. Herring. 30 specimens of paper and plate of "paper marks."	
44*	1858	(EC)	**Principia Typographica.** Vol. III. Paper Marks. By S. L. Sotheby. Most important English book on water-marks.	100/- (3 vols.)
45*	1858	(E)	**The American Drawing Book.** Well illustrated chapter on etching and aquatint.	
46	1859	(E)	**Abridgments of the Specifications relating to Printing.** A publication of the Commissioners of Patents telling of many patents relating to engraving. Also brief history of engraving. Stimulating to the experimenter.	

* Books marked thus are illustrated

47*	1860	(EC)	**The Art Exemplar.** A Guide to distinquish one species of print from another. By W. J. Stannard. Over 150 processes described and illustrated. Notes on "Cautions in collecting prints," Print Cleaning, Restoring, Tinting and Colouring Prints, Splitting Paper, Of Proofs, Of Retouching, Of Print Publishing. Rare. B.M.	
48*	1862	(EC)	**An Inquiry Concerning the Invention of Printing.** By W. Y. Ottley. Contains a folding plate of 27 watermarks and descriptions of them.	
49*	1867	(C)	**Biographical History of the Fine Arts.** 4th Edition. Tables of Terms used in the Fine Arts. Plates of engravers' monograms. Good bibliography.	
50*	1868	(EC)	**Etching and Etchers.** By P.G. Hamerton. Indispensible to etchers and collectors. A standard work. The 3rd Edition (1880) is the most desirable, containing many prints from original plates by famous modern etchers.	150/- + 190/- (1) 30/- + 63/- (2) 117/6 + 136/- (3) 150/- (3) (EI)
51	1870	(C)	**The First Proofs of the Universal Catalogue of Books on Art.** 2 vols. Bibliography of about 70,000 items. Supplement published in 1877.	
52*	1870 circa	(E)	**Etching:** It's Principles and Practice. By W. G. Shrubsole. A slight but useful handbook.	
53*	1871	(E)	**The Etcher's Handbook.** By P. G. Hamerton. Sound practical treatise.	3/6 + 4/6 (1) 8/- (2)
54*	1872	(C)	**The Origin and Antiquity of Engraving.** By W. S. Baker. Contains remarks on the utility and pleasures of prints, 1875 edition illustrated.	
55*	1873-4	(E)	**The Grammar of Painting and Engraving.** Translated from the French by K. N. Doggett. About 70 pages devoted to processes. A good translation of a standard work.	9/6 (2)

* Books marked thus are illustrated

56*	1874	(C)	**An Introduction to the Study and Collection of Ancient Prints.** By W. H. Willshire. Most important book. Chapters on processes of engraving, advice on commencing the study and collection of ancient prints, examination and purchase of prints, their conservation and arrangement, and much other matter. Second edition (1877, 2 vols.) contains in addition 7 plates of collectors' marks and names, bibliography, 2 plates of watermarks and descriptions.	63/- (1) 50/- (2)
57*	1876	(C)	**Handbook to the department of Prints and Drawings in the British Museum.** By L. Fagan. A description of the museum collection and its arrangement. Table of "Terms generally used in this work." Bibliography.	
58*	1879	(EC)	**About Etching.** By S. Haden. Notes on a collection put together by the author to illustrate the subject of etching.	13/- + 17/- 60/- (H.M.)
59*	1879	(E)	**The Etcher's Guide.** By T. Bishop.	
60*	1880	(E)	**A Treatise of Etching.** By M. Lalanne. English translation of one of the best French books on the technical side of etching.	
61*	1882	(E)	**The Graphic Arts.** By P. G. Hamerton. Sections on Etching, Drypoint and Aquatint.	30/- (1) 30/- (2)
62*	1883	(EC)	**The Relative Claims of Etching and Engraving to rank as Fine Arts.** By S. Haden. List of engraver-etchers and books indispensable to student and collector.	
62A*	1883	(C)	**Collectors' Marks.** By L. Fagan. Rare; but the only book solely devoted to this subject. 668 marks illustrated. (New revised edition 1918).	21/- + 100/-(1) 52/6 + 63/- (2)

* Books marked thus are illustrated

63*	1883	(E)	**Practical Notes on Etching.** By R. S. Chattock. Reliable, practical book. Illustrations of tools in text.	6/6
64*	1885	(EC)	**Etching.** By S. R. Koehler. Scarce work outlining technical processes and history of etching. Useful remarks on collections and collecting.	80/-
65*	1886	(C)	**Etching in America.** By J. R. W. Hitchcock. Lists of American etchers and notable American collections.	
66*	1886	(C)	**American Etchers.** By Mrs. S. van Rensselaer and F. Keppel.	
67*	1886	(EC)	**Engraving:** Its Origin, Processes and History. By H. Delaborde. Translated by R. A. M. Stevenson.	3/- + 7/6
68*	1887	(EC)	**Engravers and Engraving.** By F. Vacher. Brochure published by Birkenhead Literary and Scientific Society. Describes all principal processes.	
69*	1888	(E)	**On the Making of Etchings.** By F. Short. One of the most helpful works to etching students. Marginal illustrations showing tools.	25/- + 30/-
70*	1891-6 1900-3	(C)	**Engravings and their Value.** By J. H. Slater. Very complete guide to print collecting. Tells how to form a collection, how to examine and purchase prints, their genuineness, how to clean and preserve them. Technical terms. Brief bibliography. List of principal etchers and engravers and auction prices of their works (now unreliable). 1912 edition contains most desirable chapters on Etching, Aquatint, Proofs and States, Collectors' Marks, Publishers' Addresses, Paper and Paper Marks, Forgeries, Reprints, Copies, Prices, Suggestions to beginners.	
71*	1892	(E)	**Etching and Mezzotint Engraving.** By H. Herkomer. Useful and specific handbook.	58/- + 90/-

* Books marked thus are illustrated

72*	1892	(E)	**Drawing and Engraving.** By P. G. Hamerton. Chapter on Etching.	7/- + 10/6
73*	1894	(C)	**The Masters and Masterpieces of Engraving.** By W. O. Chapin. Useful history.	
74*	1895	(EC)	**Early Venetian Printing.** Many reproductions of watermarks.	
75*	1895	(E)	**Etching, Drypoint, Mezzotint.** By H. Paton. Thoroughly workmanlike and useful book by an etcher. Second edition (1909) contains chapter on colour etching.	
76*	1897	(C)	**Fine Prints.** By F. Wedmore. First chapter deals with collecting. Other chapters on processes and particular artists and schools. Bibliography. References to prices.	4/- (2)
77*	1897	(EC)	**Etching, Engraving, Etc.** By H. W. Singer and W. Strang. Indispensable book to etchers and collectors. Chapters on etching, drypoint, aquatint, crayon method (soft ground?). How to distinguish between different kinds of prints, how to enjoy and appreciate them. Best bibliography yet published on the technical treatises of England, France and Germany.	38/-
78	1901	(C)	**The Print Collector's Handbook.** By A. Whitman. Indispensable. Hints to beginners, etching, aquatint, collector's methods, money value of prints, the Print Room at the British Museum. Third edition 1903 has a bibliography. Sixth edition (1912) enlarged.	10/6 (6) 15/- (7)
79*	1902	(EC)	**Rariora.** 3 vols. By J. E. Hodgkin. Second volume contains letterpress reproductions and index of watermarks.	
80*	1902	(EC)	**Modern Etching and Engraving.** Edited by C. Holme. A "Studio" special. Good reproductions of best modern European etchings. Inspiring work for etchers.	8/-+18/-

* Books marked thus are illustrated

81	1902	(C)	**How Prints are Made.** By A. Curtis. Not specific enough to be of use to the student but useful introduction to the subject for the would-be collector. Appeared again in 1907 as a "Keppel Booklet."	
81A	1903	(E)	**Engraving for Illustration.** By J. Kirkbride. Historical and practical notes. Slim volume containing chapter on etching.	
82*	1903-5	(C)	**A Biographical Dictionary of Painters and Engravers.** By M. Bryan. Fourth edition. The best of its kind. Indispensable to collectors.	
83*	1904	(EC)	**Mezzotints.** By C. Davenport. Bibliography and suggestions for cleaning prints. Practical instruction as to making etchings, papers, instruments, inks.	25/-
84*	1904	(EC)	**Representative Art of our Time.** Edited by C. Holme. Sections on "The value of line in etching and drypoint," "The art and practice of monotype in colour," "The invention and development of Herkomergravure."	73/6 + 75/-
85*	1905?	(EC)	**Notes on Watermarks.** By H. Bayley. An illustrated brochure.	
86*	1905	(EC)	**How to Collect Books.** By J. H. Slater. Chapter IV. "Paper and Papermarks."	
87	1906	(E)	**Evelyn's Sculptura.** Introduction by C. F. Bell. Reprint of a book first published in 1662. Chapter on the etching press, ink, paper and printing. This chapter was omitted in the 1662 edition.	
88*	1906	(C)	**Engraving and Etching.** Translated from the German of Dr. F. Lippermann by M. Hardie. Ideal book for the beginner, student and print collector. A useful history. Bibliography of about 100 items.	

* Books marked thus are illustrated

89*	1906	(C)	**Chats on Old Prints.** By A. Hayden. Chapters on all processes, another on "How to collect." Bibliography. Glossary of terms. Another edition in 1913.	5/- (2)
90*	1908	(C)	**Byways of Collecting.** By E. Deane. Four chapters on print collecting.	
91*	1908	(C)	**How to Appreciate Prints.** By F. Weitenkampf. Indispensable to neophyte collector. Sections dealing with various engraving processes, on collecting and care of prints.	
92*	1908	(EC)	**A Short History of Engraving and Etching.** By A. M. Hind. Indispensable. Information on processes, materials, restoration of prints, paper, watermarks, collectors' marks, public and private collections, valuable bibliography of books in all languages. Classified list and index of engravers.	25/- (1) 10/6 (2)
93*	1909	(EC)	**Aquatint Engraving.** By S. T. Prideaux. One of the few books devoted solely to the subject. Bibliography of aquatinting. Appendix contains full list of aquatint engravers and books illustrated by them till 1830.	7/6
94	1909	(C)	**Book of Trade Secrets. . . for Renovating, Repairing, Improving and Preserving Old Books and Prints.** By Expert. Useful brochure arranged like a dictionary.	1/6
95*	1910	(E)	**Frederick Goulding.** By M. Hardie. The only book on a master copper plate printer.	
96	1910	(E)	**Tools and Materials used in Etching and Engraving.** By C. M. Pott and Sir F. Short. A Useful Victoria and Albert Museum pamphlet.	
97*	1910	(EC)	**Catalogue of Early Italian Engravings.** By A. M. Hind. Many reproductions of watermarks with accompanying letterpress.	

* Books marked thus are illustrated

98*	1910	(EC)	**Colour Printing and Colour Printers.** By R. M. Burch.	25/-
99*	1910	(C)	**The Golden Age of Engraving.** By F. Keppel. Offers to the collector a wealth of comment, counsel, suggestion and instruction such as no other book on the subject contains. Article on "What etchings are." Good general bibliography.	17/6
100	1911	(C)	**Print Restoration and Picture Cleaning.** By M. J. Gunn. The best book of its kind. Sections on "Anomalies in Print Values" and "Prints to Collect."	25/-
101*	1911	(EC)	**Etchings and Engravings.** What they are and are not. By Sir F. Short. An R.P.E. publication with notes on processes and care of prints. Chapters on etching, drypoint, aquatint, proofs and states, printing.	13/-
102*	1912	(C)	**Descriptive Bibliography of Engraving and Collecting Prints.** By H. C. Levis. A masterpiece of painstaking bibliography. Supplement and Index in 1913.	52/6
103*	1912	(C)	**Prints and their Makers.** By Fitzroy Carrington.	
104*	1912	(C)	**American Graphic Art.** By F. Weitenkampf.	
105*	1913	(EC)	**Modern Etchings and Engravings.** A "Studio" special.	
106*	1914	(E)	**Etching and other Graphic Arts.** By G. T. Plowman. Chapters on etching, drypoint, soft-ground, printing. A thoroughly practical technical book. Bibliography. Plates illustrating tools. List of addresses for materials.	6/-
107*	1914	(EC)	**Year Book of American Etching.** Introduction by F. Watson. 100 reproductions of original etchings.	15/-

*,Books marked thus are illustrated

108*	1914	(EC)	**Great Painter Etchers from Rembrandt to Whistler.** "Studio" Special.	21/- (C.)
108A*	1914	(C)	**Prints.** By E. M. Richter. Contains chapters on How prints are made; and history of engraving in various countries.	10/6
109*	1914	(EC)	**Etchings, Drypoints, Mezzotints.** "Studio" Special.	
110*	1917	(EC)	**Graphic Arts of Great Britain.** "Studio" Special.	14/6
111*	1919	(C)	**Modern Etchings and their Collectors.** By T. Simpson. Much about choosing impressions, forming a collection, storing and displaying prints. About prices	63/- + 84/-
112*	1920	(EC)	**Etchers and Etching.** By J. Pennell. Chapters on the history of the art together with technical explanations of modern artistic methods.	63/-
113*	1920	(C)	**Print Prices Current.** Vol. I. Oct. 1918-July 1919. By E. H. Courville. Prices fetched by prints at all the best auction sales during the year.	21/-

* Books marked thus are illustrated

The following abbreviations have been used in the column devoted to values.

(1), (2), (3), etc. = 1st, 2nd, 3rd Edition, etc.
L.I.P. = Large India Paper Edition.
E.I. = Extra Illustrated.
H.M. = Half Morocco Binding.
C. = Cloth Binding.

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A	American Art News
A	American Art Review
A	American Magazine of Art
	Apple (1919-)
	Art Annual
	Art Chronical
	Art Journal (1849-)
	Art Prices Current (1908-)
A	Art Student
	Art Union Journal (1848-49) became "Art Journal"
	Bookman's Journal and Print Collector
A	Brush and Pencil
	Burlington Magazine (1903-)
A	Collector
A	Collector and Art Critic
	Colour (1914-)
	Connoisseur (1901-)
A	Connoisseur (Philadelphia)
	Drawing and Design (1915-)
	Etcher (1879-83)
A	Fine Arts Journal
	Fine Art Trade Journal (1905-)
	Magazine of Art (1878-)
	Portfolio (1870-93)
A	Print Collectors' Quarterly (1911-16)
	Printseller and Collectors' Magazine
	Studio
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APPENDIX

NOTES ON THE ETCHING OF ZINC PLATES

Zinc plates require, even more than copper, most careful cleaning. *Cleaning*

It is advisable to use the best quality zinc as it is more even in texture and less likely to foul.

To use an ordinary dabbed and smoked ground is simply inviting foul biting and pinholes will appear all over the plate. *"Pitting"*

Rhind's black etching ball, laid with a kid dabber of soft texture, will lay a very good dabbed ground, and the writer has laid several grounds on his own plates without any pinholes in the first grounding. *Laying Ground*

Rhind's liquid etching ground is admirable for zinc plates. It requires dexterity and quickness to lay the liquid ground, owing to the volatile nature of the solvent; but when properly done it will adequately protect zinc plates. For copper it is not so much to be preferred to the dabbed ground. *Liquid Ground*

METHOD OF WORK

On a zinc plate it is well to draw in all light work before etching at all. The pinholes are usually not so deep as the lines, as they usually start a little after the former, so that if say a sky is drawn, bitten in and then stopped out well, no further pinholes are likely to occur. *Precautions*

On copper plates it is often a good idea to draw in the dark parts only and bite them first, then drawing in the lighter passages. If this is done on zinc, however, the plain parts are almost sure to foul, and this fouling will occur before the lighter lines are drawn and will continue during their biting, the result being an objectionable spotting of heavy dots, stronger than the lines.

In dark, strong passages these dots do not matter and are controlled by skilful etchers to give quality and texture.

STOPPING OUT

Stopping-out Precautions

Always allow the stopping-out varnish to dry on a zinc plate before placing it in the acid again. On copper this is not so important, but if not done it is fatal to zinc. Where heavy lines have been stopped out it is sometimes necessary to give two coats of vanish so as to protect their edges.

REBITING GROUND

When it is necessary to lay a second ground on a plate, after heating, black etching ground must be rubbed into all the lines. After this a fine kid dabber should be used. The ground must not be over-heated, otherwise it will not protect the edges of the lines, but leave a little bright line down the rough edges of the deeply bitten grooves. It is difficult to protect a zinc plate the second time and fouling is sure to occur, so all large spaces which are to be bare metal should be painted over with varnish before biting the remainder of the plate.

ACID STRENGTH

The acid strength for zinc plates may be *one* part pure acid in *twenty* of water, for delicate lines approximating to copper. For bold work, *one* in *ten* parts of water is

Biting

better and biting proceeds rapidly. Work intended to be deeply bitten should be kept very open as the line widens much more than upon copper. This widening of the line, together with its greater roughness and vigour, and the use made of foul biting, constitute the difference between copper and zinc. The latter is unrivalled for rich dark effects, but copper is far more reliable for finished effect and range of tone.

Difference between work on Zinc and Copper

SANDGRAIN

Sandgrain combines well with zinc plates for the giving of texture and tone. It is more reliable than aquatint for this purpose as the latter becomes too strong very rapidly. A plate on which there is much foul biting can sometimes be improved by light sandgrain (bitten) tones, which will harmonise with, and prevent the foul biting from becoming obtrusive.

Sandgrain and Aquatint compared

Foul Biting and Sandgrain

LAYING A GROUND WITH A BRUSH

The method of laying a ground with a brush as an alternative to using the dabber in revarnishing—to which Mr. Charlton refers on page 41 of this book—is a method mentioned by M. Lalanne in the following terms:—

"For this purpose you can use the stopping-out varnish mixed with lamp black. Spread a coat of varnish all over the plate using a very soft brush: if the copper should not be perfectly covered on the edges of the deeply etched lines, add a second coat of varnish. Do not wait till the varnish has become too dry before you execute the retouches, which, of course, must also be bitten in as usual. Mixed with lamp black, the stopping-out varnish allows even the finest lines to be seen, which would not show as well if the varnish were used in its natural state. Many engravers use this varnish instead of the transparent ground."

SERVICEABLE METHOD OF TRANSFERRING WORK TO THE GROUNDED PLATE

The Tracing

Draw the subject out the size of the plate to determine its proper placing. Now place a piece of thin tissue paper over the drawing, and with a sharp soft pencil draw in the main lines.

Place the grounded plate on a piece of paper upon the steel plank of the press, first of all making the pressure very light and seeing that the fronting and blankets are in position.

Damping the Tissue

Lightly damp the tissue paper with a piece of soft rag or sponge, taking care not to tear it, then place upon the plate with the pencil lines face downwards.

Passing through the Press

A piece of blotting paper is now put on the top and the cloths are lowered and the whole passed through the press. The pressure must be quite light, considerably less than in printing a plate. It should be possible to turn the wheel easily with one hand only.

Run the plank backwards and forwards two or three times and remove the tracing. The lines will now show in grey on the black ground, and are admirable for showing the position of objects, while not interfering with the freedom of etching. This method is very reliable if properly done as it does not injure the ground in any way owing to the softness of the tissue and the damping. On no account should the paper be used dry nor must the pressure be to great.

Precautions

Disadvantage of Tracing Gelatine

Tracing gelatine often injures the ground owing to its hardness and to the "burr" on the edges of the incised lines not being properly taken off.

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